

ECONOMIC CRUCIBLES AND MELTING-POTS.—Upon several occasions we have referred to the very excellent crucibles manufactured by the **PATENT PLUMBAGO CRUCIBLE COMPANY**; and we observe that the eastern annex, upon the incline beyond the subway of the entrance to the Horticultural Gardens, the company have a very good show of their crucibles. Among the specimens shown are some that have been melted 1000 ozs. crucible, we see by the certificate attached from Messrs. J. and Matthey, has melted 60,000 ozs. of silver, and is capable of melting 15,000 ozs. more. There is also a crucible from the Royal Mint that has worked nine days melting bronze. Messrs. Brown and Wignall, of the Bank of England, send a crucible they have employed for melting gold. One crucible that has been worked 61 times, and melted 54, are from Messrs. Milne, the gas engineers of Edinburgh. Messrs. Milne and Christie, brass founders, of Glasgow, contribute some that have done 54 and 56 heats, melting brass and copper. These crucibles are exclusively employed in the Woolwich Arsenal, and other Government departments, including the Royal Mints, and also in the Indian and Australian Mints, and by several of the continental Governments. We give a few extracts from the testimonials received by the company. Mr. Mushet, of the Royal Mint, certifies that the crucibles of the Patent Crucible Company have for some time been adopted in that establishment, to the exclusion of all others, and have been found to be in the time and cost the most economical, but in use they are the most perfect. The original cost is considerable, but on account of the great durability in the fire, and general freedom from casualities, Colonel Leake, of the Woolwich Arsenal, says they have been employed in the Royal Arsenal for melting gun metal, &c., for upwards of 24 years, and are found to answer better than any other kind. The quantity melted in any one crucible varies from 25 to 36 cwt. Lieut.-Col. Clerk states that the crucibles superior to any crucibles previously supplied to the Royal Carriage Department, the length of time they last officiated as such, and the saving in comparison with crucibles of other manufacture. The Director of the Eynoord Works, in Rotterdam, writes "that they very largely

in their durability, and that they shall never use any others, the superiority in addition to their durability consists in their never cracking in the furnace, which prevents the danger of losing the liquid metal, a circumstance that often happens with the ordinary pots; thus, for example, in a No. 35 we have melted 1239 kilos. (nearly 3000 lbs.), consisting of pieces of cannon and copper, whilst to melt the same quantity of metal would have required at least seven or eight German pots. The master of the Paris Mint says that each crucible runs from 40 to 60 pourings, and can with safety be dipped in cold water when at red heat, and used again immediately, as it had not undergone any change of temperature, and that they never have an accident. Mr. Osborne, Bishopsgate Foundry, London, says he should unhesitatingly recommend them to every brass founder for their durability and economy. These few extracts lead us to the conclusion that they work on the average fully 40 heats, never crack, and being composed of carbon, the saving of fuel is very considerable. The Patent Plumbago Crucible Company exhibit various kinds of crucibles other than those for which they own the patent right, and keep them in stock merely for the convenience of shippers, but do not recommend them, regarding their patent crucibles as infinitely superior. When first used the patent crucibles require careful annealing, but afterwards they require no care whatever. The several kinds of crucibles being exhibited side by side gives an excellent opportunity for judging of their relative merits.

UTILIZATION OF TIN-PLATE WASTE.—The large quantity of tin-plate waste annually made, and the low price which it realises in the market, offer great inducements to chemists and others to attempt to bring the products obtainable from it into a saleable form; and in proportion as more or fewer of the component parts of the waste substance are made marketable, so will the commercial value of an invention be judged of. In the Austrian department, on the western side of the north-western transept, will be found an interesting case of products, exhibited by Messrs. E. and C. Kuhn, manufacturing chemists, of Sechshaus, near Vienna, which shows that they have succeeded in obtaining from tin-plate clippings pure tin, ammoniac, prussian blue, and several minor articles, all of which are of their commercial value, and readily saleable. The process involves nothing injurious to health; and a capital of 1500l. or 1600l. is sufficient for the purchase of the entire plant and apparatus necessary, upon which outlay the inventors calculate that a profit of at least 80 per cent. may be realised. Mr. Kuhn are working the invention in Austria, but are willing to sell the right to work it in other countries.

STEEL SPRING CLIP FISH-JOINTS.—An important improvement in the permanent way of railways is exhibited on the eastern side of the western transept, in the shape of a tempered steel spring clip, intended as a substitute for fish-plates. The inventor is Mr. G. E. Dering, of Lockleys, Elms, and from the success which has attended the use of the joint no doubt is entertained that its adoption will become general. Bolts, nuts, &c., which have hitherto been inseparable from rail-joints, are rendered unnecessary, yet a stronger and smoother joint than usual is the result. The spring-clip could, without doubt, be applied in one-tenth the time of ordinary fish-plates, and all damage to the rails is avoided. Mr. Dering also exhibits tempered steel keys and spring trenails, each of which appears to possess several advantages over those in ordinary use. The spring keys possess all the advantages of wood, and is ten times more durable, holding the rail very firmly, and being unaffected by moisture or dryness. It is proposed to use this key in joint-chairs, in which position it is found to possess all the advantages of an ordinary fish, though the cost is but one-half. The advantage claimed for the tempered steel trenails is that they are more efficient and durable than either wooden trenails or iron spikes; and that although not loosened by vibration, can be readily extricated when requisite, and without injury. A pair of brazed joints, however, is probably the most interesting part of Mr. Dering's collection, since they have been submitted to a long practical test. The joints exhibited have carried the whole traffic of the up main line of the Great Northern Railway for nearly four years, yet are now absolutely perfect. It is calculated that during the time the joints were down 86,000 locomotives, and nearly 4,000,000 wheels passed over them, and we understand that the sole cause of their removal was to enable them to be exhibited.

ANTI-FRCTIONAL SAFETY-CAGE.—In the south court of the eastern transept, and just beyond the Horticultural subway, we noticed a very ingenious and effective safety-cage for miners, the invention of Mr. J. T. Calow, of Staveley, Derbyshire. The chief recommendation of the cage is that it is extremely economic, and that but one spring, in a well-proportioned position, is used. The grips which take into the spears never touch except upon the breakage of the rope; and whilst in other safety-cages the spring is acted upon at every ascent or descent, Mr. Calow has contrived that whenever the cage is supported, whether by the tension of the rope or from being at rest on the floor of the mine, the spring remains in its normal condition. Immediately, however, upon the breakage of the rope, the spring comes into action, and by the aid of simple levers the cage is gripped by the guide-rods, and the safety of those in the cage is secured. The spring can at any time be replaced for 2s., and the cost of the entire apparatus—both for providing against the breakage of the rope and over-winding—is proportionately cheap. The over-winding apparatus consists of a pair of expanded hooks, which upon being drawn through a ring at the top of the head gear disconnects the cage from the rope, and all danger is at an end. The apparatus is in use in pits belonging to the Butterley Company, West Silksstone, West Staveley, and elsewhere, and in every case has given entire satisfaction. Mr. Moody, the viewer of West Staveley and several other collieries in the district, has given the most flattering testimonial, in which he states that during the period that Mr. Calow's cage has been in use there ten breakages have occurred, and that further accident has in every case been prevented by the cage; three of these accidents, Mr. Moody considers, would have been fatal but for the safety apparatus.

GRAP AND EFFECTIVE PUMP.—In the western annexe, between the two great pumps exhibited by Messrs. Gwynne and Co., and Messrs. Easton and Amos respectively, is a small yet not less effective machine, with which Mr. J. U. Baster, the pump exhibited has a tube of 4½-inch bore, and is worked by a 2-horse power engine only, yet raises with the greatest facility from 450 to 500 gallons of water per minute, the pulley revolving at the rate of 80 to 84 turns per minute. The entire space occupied by the pump does not exceed 4 ft. by 1½ ft., and this space would be equally adapted for pumping from the deepest mine. Since the first introduction of the chain-pump by Mr. Depron, some 70 years since, it has been acknowledged that the chain-pump offers many advantages, but it is only recently that anything like perfection has been reached. The washers employed upon the chain-pump are at short intervals along the length of the endless chain, which, hardening in the water, caused a large amount of friction upon the interior of the tubes, and these tubes, again, being of the same diameter from the bottom to the top of the column, a considerable portion both of the water and of motive-power was wasted. Since the time India-rubber has come into more extensive use, and Mr. J. U. Baster's principle, with the addition of improvement, which brings it nearly as possible to perfection. For the flat disc employed by Mr. Baster he substitutes a small cylindrical piston of gutta-percha; for the washers he substitutes washers of strong India-rubber; and lastly, instead of a tube of uniform bore, he employs a tube more contracted at one part than another, the effect being to make each disc act as a piston upon the narrow part of the tube. The pump acts as a force-pump, according to the depth of the water in which the pump is immersed. It acts as a force-pump when the level of the water to be pumped exceeds 40 in., for then, as by the well-known laws of hydrostatics, the water will rise in the interior of the tube to the same level as on the exterior, the disc entering the tube will force the water already in the tube before it. But should the water in the pump-tube be immersed less than a yard in depth, the suction principle comes into play; in this case the disc entering the tube after moving upwards about 4 in. (for we suppose that the bottom of the tube is trumpet-shaped, to facilitate the entrance of the water), reaches the contracted portion of the tube, and draws the water after it, ready to be forced onward by the following disc. It will be seen that in this compressed space the discs becoming packed by the action of the India-rubber, play the part of a piston, the suction being caused either by a driving-band and steam-power, or by any other motor. Baster's pump has attracted much attention since the opening of the Exhibition, and we understand the inventor has already received many orders for all quarters of the globe. We have never seen an equal quantity of water raised by a pump with a tube of equal diameter, and, there-

fore, unhesitatingly direct to it the attention of all using pumping machinery. The power of the pump may be increased to any extent, since the greater the speed of the pulley the greater is the number of the discs which pass through the tube, and the greater the quantity of water raised. The power of the pump, however, is not its only recommendation; the space it occupies in the shaft is extremely small, and as the descending part of the chain counterbalances the rising portion, balance-bobs and all similar contrivances are unnecessary. A framework of wood or iron supports the axle upon which the disc-pulley is fixed, the strength, of course, depending upon the depth from which the water is to be pumped, and the weight of the tubes, whilst the action of the pump is regulated by an adequate fly-wheel. In addition to the improvements above referred to, the different forms of disc, the substitution of India-rubber washers for leather, and the contracted tube, we may mention that the upper disc-pulley is provided with indentations into which the discs fall; they are thus kept always uninjured, whilst the motion of the chain is smooth and uninterrupted; and at the lower end of the pump-tube a small wooden pulley, placed slightly behind the tube, is provided, which guides the chain and discs into the mouth of the tube.

COG-WHEELS SUPERSEDED.—A new system of transmitting power from a horizontal to a vertical axis, without cog-wheels, is exhibited by Messrs. FONTAINEBLEAU and GILBERT, of Finsbury, in the western annexe. The machine is the invention of Mr. L. Thirion, of Belgium, and consists of a helicoidal spring, having two axes at its two extremities. If these two axes are placed in a relative position with regard to one another, so as to make either a right acute or obtuse angle, and if motion is given to one of them by means of a crank-arm, water-wheel, or steam-engine, the motion will be transmitted to the other axis without noise or shock, and only with the friction of the bearings. The power transmitted by this means is, therefore, limited only by the strength of the bars composing the springs. The inventor has successfully applied this new power to a windmill having no cog-wheels, and which is composed of a hollow wooden or iron upright, on the top of which is placed a flexible spiral spring with its two axes, one of which passes through the standard and the other rests on a support forming the vane of the mill. By the aid of this invention motive power may be secured continuously, and at a very slight expense.

BAND-LINK CHAIN CABLES FOR MINES.—The importance of good and cheap chains for mining purposes is too well known to require comment, we would, therefore, direct the attention of the mining community to a small chain-cable making machine, exhibited on the eastern side of the western annexe. As it is admitted that tender twigs bound together in a fascine acquire collectively an enormous strength, the soundness of the principle upon which the band-link chain-cable is made would be at once understood, even had the great strength of the chain not already been tested by actual experience. Each link of the chain consists of thin hoop-iron, wound in the form of a link until the desired thickness has been attained. Thickness for thickness, the band-link chain is about twice as strong as an ordinary first quality chain, and sudden rupture is almost impossible. It is urged by the inventors of the new chain (Mr. SISCO, of Corsica, and Madame SINIBALDI, of Greenwich), and not without reason, that the chain-cable makers' assertion that their cables have been tested, and cannot, therefore, be defective, cannot be relied upon, and even that test is against the safety of a chain, for when a chain is tested, say to 120 tons, if 1 ton more were added the chain would snap. Everybody knows this: the test is injurious, then, yet it is indispensable in the present rotten system. Respecting the welding and the flaw, which are the greatest enemies of the present system, no one will dare say that they can preserve the chain-cable (now in use) from these; if the welding is too hot, it is bad—if too cold, it is bad—if it is good, you cannot ascertain it; and even when the welding is good, the iron has been so much heated for the welding that it makes it brittle and weak. But in admitting that by mere chance the iron should not be weakened, if a flaw should be in one of the links it would make the whole chain dangerous, yet such a flaw could not be pointed out by anyone. In the band-link chain the welding, which is unsafe and uncertain, is done away with, the hoop-iron is coiled cold, and when in the state of a chain the method of brazing heats so equally every grain of the iron that the union of the different layers is perfect, and must be perfect. So the strength of the chain is immense under a very small volume; every layer of iron has a skin, and the links made of 16 layers has 16 skins, while the wrought-iron links have only one skin, which makes them snap when it is cut, but the links will not snap, and cannot snap; if one skin is broken 15 would remain, and ample warning would be given before an accident has resulted. The result of the Government tests of Sisco's chain is very interesting. The chain was 2 in. broad and 2 in. thick, with stays in the centre of each two links. When placed in the testing-frame, attached to a testing-chain of 2½ in. in diameter, and on the hydraulic power being applied, one of the links was lengthened five-eighths of an inch, and the other one-eighth of an inch, when it reached a strain of 110 tons, and the 2½-in. testing-chain broke off in two places when the strain reached 114 tons. The hoop-iron chain had some openings in one of the links, which had been imperfectly brazed, but it did not appear to have been made otherwise defective. One link of the same dimensions, 2 in. thick and 2 in. broad, was afterwards placed in the testing-frame, and when a strain of 70 tons was applied it had lengthened one-twelfth of an inch; with 80 tons, one-eighth of an inch; with 100 tons, three-sixteenths; with 110 tons, ½ in.; with 115 tons, five-sixteenths; and when it reached 120 tons strain it was considered advisable not to continue the strain, as it was so great as to loosen the stone frame on which the machine rested, and liable to damage other parts of the powerful iron frame of the machine. The strain applied on this occasion was 1 ton more than had ever been previously applied, and the hoop-chain was only slightly opened on one side. With such results as these the facility for making a really reliable chain cannot be doubted, yet we are assured that the cost per cwt. is not more than that of common chain; and there is the additional advantage that the machine is so small and cheap that it could be employed at every mine or colliery, or could be carried by every ship, and used by the sailors in case of the loss of a cable.

LARGE IRON RAILWAY BRIDGE FOR INDIA.—There is in course of construction, in Manchester, an iron railway and carriage-way bridge combined, of whose character and dimensions probably very few of the inhabitants have any conception. Messrs. Ormerod, Grierison, and Co., of the St. George's Ironworks, Hulme, have just completed the first of a series of 12 spans, which are to constitute an iron railway bridge over the river Juma, near Delhi. The bridge is for the East India Railway Company, and is from designs by Mr. A. M. Rendel, C.E., London. It is so constructed as to answer the double purpose of a railway and an ordinary road, the railway being along the top and the roadway beneath it. Each girder is 216 ft. long, and this gives a clear span of 206 ft. between the piers, of which there will be 11. The 12 spans will, therefore, form a structure having a total length of over half-a-mile. The first span has been completely riveted up in the works, and loaded with nearly 450 tons of pig-iron. The deflections were carefully noted, but the details would not be of general interest, and it may be sufficient to state that the result of the test was even more favourable than was anticipated. The iron has been supplied by the Shelton Bar Iron Company, near Stoke, and was required to bear a tensile strain of 21 tons to the inch of section. The breaking strain is estimated at from 2500 to 3000 tons, equally distributed, which leaves ample margin beyond any weight to which it will be subjected. The bridge, notwithstanding its great length, has a light and airy appearance.

SLATE-DRESSING MACHINES.—At the Maen Offren Slate Quarries, Festiniog, Mr. Henry Gilson has introduced some improvements in the machinery for cutting and trimming the edges of the slates, and has obtained a patent for his invention. The machine consists of a wheel in the form of an ordinary fly-wheel, working upon horizontal axes fixed on a strong frame, with two, three, or more knives for cutting and trimming the slates, fixed at equal distances on the side of the wheel, or if two slate cutters work at the same wheel then another set of knives may be fixed upon the other side of the wheel in alternate order. The knives should be fixed at such distances from the spokes of the wheel as to admit of the slate being presented to the knife without the projecting end coming in contact with the spokes of the wheel. The knives should be of sufficient length to cut the sides of the largest slates in ordinary use. They may be fixed either parallel to the spokes of the wheel or diverging slightly from them, but radially from the axis of motion, so that the inner end of the knife shall first come in contact with the slate. The slate to be cut is rested obliquely on a cutting edge fixed on the framework of the machine, and receives the revolving knife progressively from its inner to its outer extremity, as from a pair of shears. The knives to make progressive cuts more gradual may be slightly curved upwards, like a scimitar. The size of slate is regulated by gauges, as usual. The knives may form the spokes of the wheel, but he prefers them, as described, a short distance from the spokes.

INCREASING THE ILLUMINATING POWER OF GAS.—Mr. W. J. Williams, Warrford Court, provisionally specified an improved process of charging illuminating gas with the vapour of hydrous carbon for the purpose of increasing its illuminating properties. He proposes to cause the gas in its passage from the meter to the burners to pass through a series of rows of perpendicular cords or threads saturated with hydrocarbon liquid, by which it becomes charged with hydrocarbon vapour, and as the gas is liable to become overcharged with the vapour, and cause a waste of the hydrous carbon, often becoming very troublesome by condensing and filling up the pipes obstructing the flow of the gas, and flowing out of the burners; when opened he causes the gas to pass through a condenser, where the excess of hydrocarbon vapour is condensed, and the liquid resulting from the condensation flows back to the evaporating chamber, or some other receptacle from which it can be returned to the evaporator, while the gas in a properly charged state passes on to the burners.

Meetings of Mining Companies.

KELLY BRAY MINING COMPANY.

A general meeting of proprietors was held at the company's offices, Austinfrs, on Thursday, Mr. J. FIELD in the chair.
Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed.
A statement of accounts for the four months ending April showed—
Error in last balance-sheet.....£ 50 6 1
January mine cost, merchants' bills, &c..... 401 8 10
February ditto..... 418 7 11
March ditto..... 418 19 0
April ditto..... 595 8 9
Forfeited shares..... 22 11 0 = £1708 18 7
Balance last audit..... £ 47 8 3
Call..... 604 3 2
Copper ore sold..... 841 1 11 = 1492 12 4
Leaving debit balance..... £114 8 3

The report of the agents was read, as follows:—
June 10.—We are driving and stopping in the 75 east in the direction of the shoot of ore which was worked on in the levels below, and yielded large quantities of ore; at the above-named point the lode has improved during the past fortnight; it is now 2 ft. wide, producing upwards of 2 tons of ore per fm.—a very promising looking lode, going east in whole ground. The 35 has been driven east in the past four months 9 fms. 3 ft., and is now about 52 fms. east of the western engine-shaft; the last 12 fms. which have been driven have yielded a fair quantity of ore; the lode in the end is still looking very kindly, producing 2½ tons of fair quality ore per fathom; the back is of about the same value for the above-named length, 12 fathoms, and the ground is whole to surface the entire length of the set, which is three parts of a mile in length eastward. In the past month we have communicated a rise from the back of the 40, which has given good ventilation; and it is also more convenient for getting away the stuff, as there is a railroad in the 40. If the same prospects continue as at present in the two above-named levels, the mine will be in a much better position ere long.—Eastern Mine: The 70 has been driven east in the past four months 11 fms. 4 feet, and is now east of shaft about 41 fms. 4 ft. The lode will average throughout this drive from 1 to 2½ ft. wide, composed of quartz, mundle, fluor-spar, blende, and occasionally stones of ore; the lode at present in the above-named end is of much the same character as for some time past, but the ground appears to be changing; there is more even showing in the end than for some time past, which is of a mineralised character. I would recommend a trip-plat to be cut at once, and a railroad laid down at the above-named level, which will very much facilitate the clearing of the stuff from both the levels—viz., the 70 and 60, as the stuff can be passed down from the 60 through the winze which is communicated from one level to the other; by so doing one plat will answer the purpose of both levels. The winze which we commenced in the bottom of the 60, about 20 fms. east of the former winze, is suspended for the time, owing to there being too much water to contend with before it is drained by the 70, and the men are put to drive the 60 east, which is now about 75 fms. east of cross-cut, in which the lode is 1½ ft. wide, composed of quartz, mundle, blende, and occasionally stones of ore; and the water is freely issuing from the end, showing indications of there being a porous lode ahead, and the ground is easy for exploring. I would recommend the following network operations to be prosecuted most vigorously—viz., drive and stop in the 75 east by six or more men; drive and stop in the 35 east by a full party of men, and set all the ground which will pay on tribute in the western mine. In the eastern mine, drive the 70 and 60 by full parties of men eastward, and sink winzes when required for the ventilation and proving the ground; by so doing there is every chance of meeting with productive ground dipping from Kit Hill west, as it is the general dip of the ore-bearing ground in the locality. To carry out these operations properly, I estimate the monthly cost will be from £1000 to £1000, per month; and if the return prospects continue as at present, the cost will be increased. We have now about 70 tons of mundle ready for sale on the mine and at quay. We are dressing ore for the next sampling with all possible dispatch.—S. JAMES.

The CHAIRMAN said, although the committee had the fullest confidence in their agent, yet they had thought it would be satisfactory to the shareholders to have the opinion of a disinterested authority, and had accordingly called in Capt. Rowe. From that report it would be seen that the upper levels in the western mine were really looking much more promising.

The SECRETARY read the report referred to. It stated that at the western mine the 75 was entering a new run of ore, the present end being worth about 2 tons of good ore per fm. The 35 was now passing over a good lode, and the present end was turning out from 2 to 2½ tons of ore per fm. With respect to the bottom of the mine, he recommended that the pitwork should be pulled up to the 105, as the nature of the ground was uncongenial, and as from that point to surface hundreds of fathoms of whole ground were standing, which presented excellent chances of good discoveries. In the eastern mine he recommended the prosecution of the 60 and 70, as well as the pushing of the ends eastward with all possible dispatch. Capt. Rowe considered the chances very good for future discoveries.

A SHAREHOLDER said that the views of Capt. Rowe were in accordance with those of their own agent. He considered that the prospects of the eastern as well as the western mine were much more satisfactory than for some time past. He had no reason to believe but that the ore ground now being discovered would increase, and that at another meeting it would be shown that no further call would be required.

The SECRETARY said that if the 35 and 75 ends continued as productive as at present it would clearly prove there was a distinct shoot of ore coming from the east; and that the 35 end was passing into another shoot of ore eastward, of a similar character to that in the 75. If so, having 30 fms. of backs, which would soon lay open a very large and productive piece of ground, and looking at the agent's report referring to the eastern levels, and seeing that the 70 end was in ground of a mineralised character, with indications of the elvan-course being near at hand, he fully believed that some important discoveries would take place in the coming four months, and that this property would again take a prominent position.

The report was received and adopted, and the accounts passed and allowed.

Upon the proposition of Mr. MAJOR, seconded by Mr. DUNLEAVY, it was resolved that the recommendations of the agent and of Capt. Rowe, with reference to the pitwork in the western mine, be forthwith carried out. A call of 2s. 6d. per share was made.

Messrs. Field, Richards, and Sharp were appointed the committee of management.

A vote of thanks to the Chairman terminated the proceedings.

CHARLOTTE UNITED MINING COMPANY.

A general meeting of proprietors was held at the company's offices, Austinfrs, on Tuesday, Mr. PHILLIPS in the chair.

Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed.

A statement of accounts for the four months ending March showed—
Balance last audit.....£1641 14 10
Dec. mine cost, merchants' bills, &c..... 921 1 11
Jan. ditto..... 1001 5 6
Feb. ditto..... 791 8 6
March ditto..... 818 18 11
Dues..... 88 19 0 = £2368 9 4
Call..... £1595 5 8
Copper ore sold..... 1857 6 10
Tin ditto..... 13 6 9
Cin account..... 87 5 6 = 3553 4 9
Leaving debit balance..... £1710 4 7

The report of the agents was read, as follows:—
June 7.—The lode in the 80, west of the engine-shaft, will produce 1 ton of ore per fathom; there is a small cross lode coming into this end which is disordering the lode for the present, but we hope to get through it in a few days. The stopes in the back of the south level will produce 2 tons of ore per fathom. The lode in the 60 east, on the new north level, is yielding ½ ton of ore per fathom, and is looking a very promising end. The lode in the 50 west, on King's lode, is yielding 1 ton of ore per fathom, and improved since our last report. The lode in the 60 east, on King's lode, is split into three branches. The lode in King's shaft will produce stones of ore. At Trenow the lode in the 45, east of Norden's shaft, is 6 feet wide, with good stones of ore. The lode in the 45 west is 2 ft. wide, composed of spar and mundle, with some black and yellow ore. We have at present thirty men and five boys employed on pitwork, and thirty-five men on tribute; three smiths, one carpenter, six landers and fillers; one man, two boys, and seventeen girls in the dressing department.—R. KENDALL, J. PENNERTHY.

A report from Capt. S. Williams was also read, recommending the abandonment of the Trenow part of the set. The prospects at the bottom of the Charlotte engine-shaft being exceedingly good, and several side lodes having been cut, he recommended that the 60-inch engine at Trenow should be removed to Charlotte proper, by which means they would be able to sink considerably deeper, and cross-cut to the side lode; in fact, lay open the property. [The expenditure would not exceed 10000, or 12000.] By carrying out this plan he considered that profitable results would accrue in a very short time.

The CHAIRMAN said, in order to bring the various matters which would have to be determined upon before the meeting, he would move that the accounts just read be allowed and passed.

A SHAREHOLDER called attention to a statement which appeared in the *Mining Journal* of May 31, and written by his "Trenow correspondent." In that communication the onus and blame of the outlay at Trenow was thrown on the London office and London management, although it was notorious fact, well known at least in the neighbourhood of Marazion, that Mr. A. Bennett was then purser of the mine, and that the engine-house had been built and the engine was on the mine prior to the company being placed under London management, and he thought it hardly probable that this "Trenow correspondent" was not aware of the fact that the set, belonging to Mr. Trevelyan, and embracing one-third of the Charlotte United property, would not have been granted unless with the special stipulation that the 60-inch engine was erected at Trenow. He regarded it as a most unfortunate circumstance that such a statement should have appeared in the columns of such a wide-spread and valuable paper as the *Mining Journal*, as its only tendency could be to do great mischief.

Mr. HARRINGTON was certainly much surprised to see the statement, but had paid very little attention to it, more especially that portion of it which deprecated London management. His great objection to many mining enterprises was that the whole of the management was entrusted to a select few residing near the property, from whom, in many cases, no information could be obtained by those shareholders who resided in London and in different parts of the country. But his complaint in this particular case was that, in the face of such glowing reports from their agents, the result had been something considerably worse than nothing.

The SECRETARY said, that as he was aware most of the shareholders must be cognisant that the statements made in the communication referred to were not in accordance with facts, he had not thought it worth his while to trouble himself about it; but, at the same time, he certainly did regret that an article should appear in a public paper pointing out the names of gentlemen, and narrating their purely private transactions. He was not aware in what manner those gentlemen regarded such a parade of their private dealings, but he certainly had yet to learn that gentlemen were not at perfect liberty, without a public notification of the fact, to invest any portion of their capital in Wheal Charlotte, or any other mineral property; for if such investment resulted in a loss it was certainly with themselves, and not with the public. But the business of the present meeting was to determine as to the future of the mine.

Mr. HOSKING (who did not arrive till some time after the business of the meeting had commenced) said that his views still were that the 60-in. engine should be removed from Trenow to the Charlotte engine-shaft. He might state that he had the mine inspected on Monday last, and the report spoke most favourably of the south lode. The report was adopted, and the accounts were passed and allowed, and a resolution

was passed to the effect that the 60-in. engine and pitwork should be removed from Trenow to the Charlotte engine-shaft.

The Chairman said the next question to consider was what operations were to be adopted for the future.

Mr. J. HOSKING said he had purchased his shares with the intention of having the entire management of the mine into his own hands.

A SHAREHOLDER suggested that as Mr. Hosking had recently purchased so large an interest he should be appointed local purser, and that a committee should be appointed to control the finances in London—at any rate, until next meeting.

Mr. J. HOSKING said that would not accord with his views, his object in purchasing such a large interest being to obtain the entire control of the mine.

Mr. FOCOCK wished to know whether that meant that Mr. Hosking was to receive all monies and disburse of the same, and to have full control over the operations at the mine?

Mr. HOSKING replied that such was the case, but the expenditure would, of course, be examined into at each four monthly meeting.

The Chairman having enquired if any gentleman would propose a resolution to that effect, and no response being made,

Mr. J. HOSKING said he should propose the resolution himself—that Mr. J. Hosking, of Marazion, should be appointed purser and manager.

Mr. HUGH seconded the proposition, but that gentleman, not being a registered shareholder, could not legally move, second, or vote upon any proposition.

The Chairman, after some discussion, finding there was no second to the proposition, and seeing that Mr. Hosking held 2400 shares, and wishing the matter to be carried through in good spirit, seconded the proposition.

The SECRETARY said he was glad the Chairman had taken that step; and he (Mr. King) could only say that he would do all he possibly could to further the views of Mr. Hosking, in promoting the best interests of the undertaking. He believed that from Mr. Hosking's knowledge of mining properties in that district, and seeing that he held a large interest in the mine, his supervision of the future operations would prove beneficial to the undertaking.

He considered the quicker the Trenow engine was removed to Charlotte proper the sooner would the shareholders be relieved from calls. He had a very good opinion of Mr. Hosking, and the ground was easy, and the ore of a very rich character.

It was resolved that Mr. J. Hosking be appointed purser and manager.

Upon the proposition of Mr. HOSKING, seconded by the CHAIRMAN, the thanks of the meeting were given to Mr. E. King, the secretary, for his past services, and begged to state that the mine had not been removed from his office on account of any dereliction of duty, but from a wish, on the part of Mr. Hosking, who has purchased a large number of shares, to have the sole management in Cornwall.

A *pro rata* call of 5s. 9d. per share was made; and a resolution was passed authorising Mr. King to hand over the books and papers to Mr. Hosking at an early day.

The proceedings terminated with a vote of thanks to the Chairman.

RIBDEN MINING COMPANY.

At a meeting of shareholders, held on Wednesday, at the Midland Hotel, Derby (Mr. THOMAS CULLEN in the chair), Mr. W. C. WATSON (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.—The CHAIRMAN opened the proceedings by stating he much regretted to inform the shareholders that, in consequence of the preference shares not being taken up in conformity with the resolution passed at a previous meeting, he saw no alternative to winding-up the company; and the result was a resolution being carried of a voluntary winding-up of the company forthwith; at the same time the Chairman and the greatest number of the shareholders who were present expressed the greatest confidence in its ultimate success, and hoped that a new company would be at once formed to see it realised.

Mr. WOOD, a director, and Mr. GILLESPIE, a shareholder, have had the opinion of two practical miners, one of whom, who has had more than forty years' experience of this district, says—"The appearance of the lode in the 70, west of Gilbert's shaft, which is charged more or less throughout with excellent copper, common to this district, is enough to justify the opinion of any practical miner, and you approach the junction of the slate and millstone grit, in connection with the intersection of the several lodes crossing to the west of your present working, a rich mine will be the result. The work on the mine hitherto done is most substantial, and on the most scientific principles, and all the heavy outlay done with it, therefore, strongly advise you by all means to urge the accomplishment of reaching the junction of the different cross-lodes and changes of rock before named, and not to sacrifice such a valuable property."

The other says—"From my experience of mining in the several counties in England and Wales, I do not think there is a better trial than you have before you in the 70, west of Gilbert's shaft; and, in my opinion, you will soon have a large bunch of ore in that direction. It will, therefore, be seen, in the event of the present company being wound-up, that a new one may be formed under very favourable circumstances."

LOWER TALDRWS SLATE COMPANY (LIMITED).

An ordinary half-yearly general meeting of proprietors was held at the company's offices, 32, Ducklesbury, on Tuesday.—Mr. P. MONAGHAN A. MOORE in the chair.

Mr. P. J. KEARNEY (the secretary) read the notice convening the meeting, and the report of the directors, as follows:—

In submitting for your consideration the following summary of their management of your property during the past nine months, and more particularly the period which has elapsed since the general meeting in December last, your directors have satisfaction in stating that nothing has since transpired to diminish in any way their confidence as to the ultimate success of your undertaking; and whilst regretting, in common with yourselves, the failure of their original anticipations of an early produce of slates, which were founded on professional reports laid before the shareholders, they see no reason to doubt the intrinsic value of your property, and that it is one which, when fully developed, cannot fail to realise satisfactory results.

At the December meeting your directors gave a short statement of the position of the company up to that date, and likewise laid before it a carefully prepared plan for opening up the quarry, together with a corresponding estimate of expenditure submitted to them by Mr. Fuller, your engineer. Therein you were informed that, at the depth of 13 yards, solid slate rock had been reached, by means of two extra trial shafts, and its existence at that depth practically demonstrated. You were also informed that at the expiration of about six months from thence, subject to the expenditure and management of working then proposed, your engineer hoped to be in a position to commence working the solid rock. Subsequently, however, and after mature consideration, the directors felt it to be their duty to direct a continuation of the trials already made, before incurring the additional outlay involved in the advanced concurrent removal of the surface debris, increased, as it appeared likely to be, by the threatening general advance of wages in the district. Your board being satisfied that the quality of the slate cannot be surpassed, have during the progress of the above-mentioned trials, combined with the evidence afforded by the adjoining quarries, both above and below Taldrws, on the same slate band, arrived at the conclusion that, as regards quantity also, the portion of the vein underlying your grant will, if vigorously opened up, fully confirm the favourable indications it already presents.

From the engineer's report now appended, to which they invite special attention, the shareholders will clearly perceive how the works have progressed, and their present position; as also the absolute necessity for a further expenditure, with the view of expediting, as far as practicable, the tedious and expensive operations always more or less incidental to such enterprises, which, when completed, your directors feel assured will result in establishing the value and capabilities of the quarry. Your directors also submit to you herewith a statement of the company's accounts, with the expenditure, made up to April 30 last. From this you will perceive the satisfactory manner in which the first call has been responded to, the balance in hand, and the amount of capital still unexpended; and your directors beg to draw your attention to the latter item, in justification of the renewed call which, in the absence of increased capital, and in order to carry on the works, they must soon necessarily make. Two of their body, Messrs. Banks and Moore, in accordance with the Articles of Association, will resign their seats at the general meeting, and offer themselves for re-election. The appointment of one or more auditors will also form part of the business to be transacted, the present offering themselves for re-election. In conclusion, taking into consideration the comparatively short period (only 15 months) during which you have been at actual work in developing your property, the increased value it has thereby acquired, and the probability that within another similar period it will be in full work, and yielding returns—your directors cannot but be heartily congratulatory and sympathise at your hands as a favourable judgment on the general results of their past labours.

The CHAIRMAN said, since the last general meeting the works had been prosecuted carefully and cautiously. At that time the directors were obliged to say that some delay in appointment had been experienced in not having found as good rock under the whole of the ground uncovered as had been found in the spot first opened; but, at the same time, he might now honestly say, and he spoke as a large shareholder, giving the result of an inspection of the quarry on Saturday last, that there was every possible reason to be very much pleased with its general appearance. Although he did not profess to be a slate engineer, yet he thought he might with some degree of confidence state that the present subscribed capital would be sufficient to bring the quarry into such a position as to begin to make returns of slates; but they would recollect there was a large number of shares yet to be disposed of, which, when taken up, would enable the company to open out a much more extensive scale of operations. At present the lift from the engine-house was going down, and in doing so exposed all the sides of the wall. Although they were at present working through a mass of twisted rock, which seemed to have been crushed up between two walls, and therefore unserviceable, still all the faces around were composed of slate rock. Therefore, according to all theories, as well as practical results gained elsewhere, there could be no doubt that as they went down the rock would become more consolidated, and produce a really serviceable slate. Every indication was highly satisfactory, both as regarded the joints and the character of the slates. They were on the level of the surface, and the quality of the slates was of the highest.

There was no reason to doubt that the quarry would not prove as profitable as its productive neighbours. Two quarries below them, working upon the same vein, have yielded very large quantities of slate at three or four times the depth of Lower Taldrws. For his own part, speaking as a shareholder and not as a director, he was perfectly satisfied with the outlay he had made, for he firmly believed he should have a very ample return, as he was convinced all would who did not desert the ship. Their expenditure had been made as judiciously as possible, but the wages in the valley had risen, and threatened to be increased, in consequence of the scarcity of labour, which, of course, was against them, and had to a certain extent put them out of their calculations. It was for that reason the directors had not felt themselves justified in going to a greater expense in uncovering a larger surface of ground before being perfectly satisfied as to the real character of the rock. He believed their engineer, supported by the opinions of the different managers of quarries in the valley, would satisfy the shareholders that there could be no doubt that Lower Taldrws would prove a very valuable and permanent quarry. Having stated that he would be glad to furnish any information desired, he concluded by moving the reception and adoption of the report and accounts.

Sir James Donohue had much pleasure in seconding the motion. After the clear and satisfactory explanation from the Chairman, who had so recently visited the quarry, they had every reason to be very confident as to the results of their future operations. Among the Irish shareholders there had been some little anxiety, inasmuch as the prospects held out at the inauguration of the company had led them to suppose quicker returns would be made. But the cautious and careful manner in which their engineer conducted the operations, combined with the satisfactory details submitted by the Chairman, would, he believed, remove any apprehensions as to the ultimate success of the undertaking. Indeed, to use the words of the report, "nothing has transpired to diminish in any way their confidence as to the ultimate success."

The reports and accounts were then unanimously adopted.

Upon the proposition of Mr. ALEXANDER, seconded by Mr. CRADDOCK, the retiring directors, Messrs. James Banks and P. Monaghan A. Moore, were re-elected.

The CHAIRMAN, upon his re-election as director of the company, begged to return his sincere thanks, and assured the shareholders that he had perfect confidence in the project, and would use his best exertions to bring it to a successful issue. He had shown his confidence by increasing the number of his shares to a very considerable extent.

Mr. J. Banks expressed his thanks for this renewed mark of confidence in having re-elected him to sit at the board. He would do everything in his power to promote the best interest of the undertaking, and no effort on his part would be spared to give entire satisfaction to those who had placed confidence in him.

Upon the proposition of Mr. BANKS, seconded by Mr. PATTERSON, the retiring auditors,

Messrs. Carrar and Harper, public accountants, were re-appointed, and the fee of ten guineas voted for their services during the past year.

Mr. G. L. FULLER (the company's engineer), reiterated the opinion he had expressed in his report, for he believed it was only a matter of time and outlay to make the Lower Taldrws a really productive quarry. The general opinion in the valley was that they could not do better than continue their present operations, and he did not think there was a difference of opinion as to their having a quarry near to where they were opening, although there might, perhaps, exist some difference of opinion as to the exact spot where the most workable slate would be found.

Mr. PATTERSON wished to know whether the work they had to perform was within the company's capital, and what expenditure it was estimated would be incurred to bring it into a productive state of working?

The CHAIRMAN replied, that the first question he had answered. The shaft at present going down could be sunk into really workable solid slate rock by the present capital.

Mr. FULLER said there was no doubt that the shafts were going down into good slate in both ends of the ground. He believed the present capital would be sufficient to work the slate—that is, to make it a good quarry, and every step after that would be taken with the utmost confidence.

Mr. PATTERSON wished to know whether the whole of the present capital would be expended before slates were obtained?—Mr. FULLER said they might get some slates, but not in any large quantities. But he believed after that expenditure had been made the property would be in a good position to ensure their slates making to any extent.

The CHAIRMAN said he knew of several joint-stock quarries which had been at work for one or two years, and after having spent the whole of their capital, began to make very good profits. He thought that what had been done in their property was quite a fair proportion of success; while the work they had to do to bring them into a productive state would not occupy them nearly so long as had been the case in other instances.

Mr. PATTERSON begged to move a resolution to the effect that the directors were entitled to the thanks of the shareholders for the manner in which they had conducted the undertaking.

Mr. CLAYTON seconded the proposition, which was put and carried unanimously.

The CHAIRMAN acknowledged the vote, when the usual courtesies terminated the proceedings.

AFRICAN STEAM SHIP COMPANY.

An ordinary half-yearly meeting of proprietors was held at the office of the company, Mining-lane, on Wednesday.—Mr. P. D. HADLOW in the chair.

Mr. D. CAMPBELL (the secretary) having read the advertisement convening the meeting, submitted the report of the directors, as follows:—

In conformity with the provisions of the Deed of Settlement, your directors have now to submit to you the report of the company's affairs for the six months ending April 30 last, together with the balance-sheet and statement of accounts to that date, fully examined and signed by the company's auditors. After making the authorised reserve for depreciation, which amounts to 3192l. 19s. 10d., defraying all expenses of navigating and maintaining the ships, insurance, and repairs, discharging the cost of the intercolonial service, and adjusting sundry other accounts, there remains a balance of 5097l. 2s. 5d., to the credit of the revenue account; out of which your directors recommend the payment of a dividend of 7s. 6d. per share, free of income tax, for the half-year ending April 30 last, being at the rate of 7 per cent. per annum on the company's capital. This payment will leave 4516l. 10s. 5d. to be carried over to next half-year's account.

The mail service continues to be performed in a most efficient manner. The ships have kept the contract time with great punctuality, and are in a thorough state of repair. The new steamer, *Macgregor Laird*, is now on her first voyage; and from the satisfactory report of the commander, received from Madeira, your directors have reason to believe she will prove a most valuable addition to the company's fleet. Steamers having been required by Her Majesty's Government for the conveyance of troops and stores to Canada, the directors tendered the *Cleopatra*. She was accepted, and dispatched to Halifax. Her accounts for the service are not yet closed, but the result will be satisfactory. The retiring directors are Messrs. Patrick D. Hadlow and Thomas Norton; these gentlemen being eligible, offer themselves for re-election.

The CHAIRMAN, having moved the adoption of the report and accounts, said that the report detailing the company's operations for the past six months was necessarily short, because the incidents that had taken place were very few; therefore, there was nothing to justify a more lengthy statement. There was cause for great congratulation, because, in the absence of complaint, it showed they were performing with satisfaction the most important part of their work—the postal service; and he thought the accounts showed that it was a good work in a commercial point of view, giving a satisfactory return to the shareholders. One of the most esteemed captains in the service of the Peninsular and Oriental Company, when things were going on well, used to write his report as follows:—"Everything is smooth and satisfactory." That same expression, he thought, exactly applied to the condition of the African Steam Ship Company. After making the authorised reserve for depreciation, deducting the expenses of navigating and adjusting sundry other accounts, adding to the balance of the revenue account a considerable sum on the *Hope* account, there remained a balance of 5097l. to the credit of revenue, and, therefore, available for the purpose of dividend. As regarded the mail service, they had had no complaint from the Post-office, and they had also great ground for being thankful that during the past six months they had no casualties whatever. With regard to their new ship, the *Macgregor Laird*, she was performing her duties most satisfactorily, and would prove a most successful addition to the company's fleet; her consumption of fuel was moderate. The *Cleopatra*, which had been chartered by the Government for the conveyance of troops and stores to Canada, had performed her service most efficiently, and had given great satisfaction to the passengers and officers, the captain expressing himself in very commendatory terms of her efficiency. He was glad to say that although the account was not yet settled, but would be shown in the next statement, it would prove satisfactory to the company.

The SECRETARY read several extracts of letters received from the commander of the *Macgregor Laird*, to the effect that everything worked exceedingly well. Her average speed had been about 13½ knots per hour, and her daily consumption of coal did not exceed 12 tons. The machinery worked very well; the temperature in the engine-room was very low, arising from the cylinders being so well cooled.

Mr. T. NORTON seconded the proposition adopting the report and accounts.

Mr. HADLOW, speaking from an investigation of the accounts, assured the proprietors that the company was in a very excellent position.

The motion was put and carried unanimously.

The retiring directors, Messrs. P. D. Hadlow and T. Norton, were unanimously re-elected, and the auditors were re-appointed.

Upon the proposition of Mr. TREKOR, seconded by Mr. TUXFORD, a vote of thanks was passed to the Chairman and directors for the efficient manner in which they continue to conduct the business of the company. Votes of thanks were also passed to the secretary and the officers and agents of the company.—The proceedings then terminated.

TRUTH'S ECHOES: OR SAYINGS AND DOINGS IN MINING.

The Mining Share Market has been rather active during the week, and a fair amount of new business transacted—i.e., independent of the "bulling" and "bearing" between the two accounts. The usual fortnightly settlement took place yesterday (Friday), and proved to be a very heavy account; the whole passed off with the customary accommodation. There was a scarcity of East Caradon, Ludcott, East Carn Brea, and North Trekerby shares, which probably will be made right in a day or two.

DEVON CONSOLS continue in request at buyers' prices, the drop in the standard inspirers as well as the general depression of the market having been the cause.

WEST BASKETS are in demand at present prices; the latter has considerably advanced.—WEST BASKETS are in request at higher rates.—EAST BASKET and NORTH BASKET have changed hands, the latter at lower rates.—GRANBLER and ST. AUBYN have been sought for, at minimum quotations.—TINCROFT and GREAT SOUTH TOLGUS have been in good request, the latter at improved rates.—EAST SETON, CAMBORNE VEAN, and WEST STRAT PARK have been fairly dealt in during the week.—EAST CARN BREAS have, as usual, fluctuated, and the transactions have been numerous and daily, but they left off firmer.—WHEAL GRENVILLE has receded, still they have been fairly dealt in.—EAST GREENVILLE has been more freely dealt in.—EAST TARRANT has been inquired for, and prices advanced in consequence of a reported improvement in the mine.

NORTH TREKERBY and NORTH DOWNS have been in good demand, attended with fluctuations.—EAST JAMES have changed hands at present quotations.—BOTALLOCKS have been sought for, but found scarce.—PROVIDENCE and MARGARET have been transacted.—ST. IVES CONSOLS freely required for.—GREAT FORTUNES are more freely offered.—SITNEY and CARNKEAL have had a short run, but are now offered at lower rates.—WHEAL GATTLA have been in good request, and several time bargains effected.—WHEAL PROSPERS (Brea) have shared in the transactions of the week.—EAST GRITTLA have also been dealt in.

USERS have advanced, and several transactions taken place.—WHEAL UNY and WHEAL UNION have been less active, but occasional business done.—CARN CAMBORNE and GREAT RETALLACK are offered more freely, the latter at lower rates.—EAST ROSEWARNE, ROSEWARNE CONSOLS, and ROSEWARNE UNITED have been in good demand all the week, and many bargains effected; but the latter has since been more freely offered, and the quotation weaker.

EAST CARADONS have fluctuated during the week, but left off firmer.—MARK VALLEYS are offered at lower rates.—NORTH PHENIX continues firm at present prices.—LUDCOTTS have had a great rise, and in good demand at present prices.—NORTH TARRANTS are better and good business done.—WEST CARADONS are not so firm.—POLLEARD, SOUTH CARADON, WHEAL HOOPER, and NEW SOUTH CARADON have been in good request, and several transactions in each effected.—GONAMENAS are being enquired for at present prices.—EAST DEVONS have been sought for, in consequence of a reported improvement, and shares have, consequently, advanced.—EAST RUSSELL and NORTH ROBERT have been more in request.—DRAKE WALLS, WHEAL EDWARD, and SOUTHERN shares have changed hands at present market quotations.

At GUNNIA LAKE (Clitter's adit) they have commenced sinking the engine-shaft below the adit, which at that point is about 85 fms. from surface; and having but little water to contend with, they calculate on getting down from 25 to 30 fathoms by the time the engine is erected. The general prospects of the mine continue remarkably good. There are several points in operation, including the winzes, in rich courses of ore, and they are laying open a large amount of ore ground, which can be taken away at a low price. The usual two-monthly sampling will be 120 tons; the ore being above the average quality leaves a fair profit on the monthly costs, which are from 250l. to 280l. per month; but when the shaft is completed to the next level the returns will be greatly augmented.

EAST CARADON.—The counter lode, in the 50 end east, is worth 20l. per fm., and the 60 east is also valued at 20l. per fm.; the present end is just under the point where the 50 became reduced in value about twelve months since, but in a fathom or two more driving they calculate on a great improvement, as they will then be under the point where they had the richest course of ore in the 50. The 60 west, on the new lode, is valued at 12l. per fm. No other change is reported.

SOUTH CARADON WHEAL HOOPER is without any positive change or improvement; presenting features indicative of some early discovery, which from the character of the ground may take place when least expected.—WHEAL POLLEARD is considered by many practical men of the locality to possess the elements of a productive mine. Its geological position, situated in a great mineralised district, with the several lodes traversing the entire set, which have proved so profitable in the neighbouring mines, with an excellent exposer to carry out the operations, are characteristics which united seldom fall in producing profitable results. These observations arise in consequence of the recent numerous transactions which have taken place in the shares.—NORTH TREKERBY continues to look remarkably well; indeed, never looked so well as at the present time. The ends have improved. In Tresider's shaft the lode is now worth 70l. per fathom, and the next sampling will be 400 tons.

At GREAT RETALLACK they have re-set the sinking of the shaft, in which they have a promising lode, and likely to become productive in sinking. The other places are without any change or notice.—At WHEAL HOPE the 28 west shows indications of improvement, the lode being spotted with lead. They are about clearing the 28, preparatory to operations in that level, and purpose sampling 10 tons of lead on Monday.

—EAST BUDNICK is looking more encouraging in the 17 west, and they expect to intercept another lode a few fathoms ahead, which has produced some lead in the south cross-cut. Rudnick Consols lode is also expected to be shortly intersected.—CARN

CAMBORNE continues to hold out encouragement, which the operations are expected to realise. The sinking of the shaft will, it is expected, develop some very good lodes, assuming a very promising character.—There is reported to be some very favourable appearances, which will in a short time result in a general improvement in the several points of operations, towards which much confidence is now being directed.

CRANE: The lode in the bottom of the shaft continues to look well for an early great improvement. The discoveries recently noticed are of the same nature and character as reported last week, and the prospects generally of that character as to lead to the expectation of a very important and general discovery.

At CHARLOTTE UNITED meeting, on Tuesday, a call of 5s. 9d. per share was made, and Mr. Hosking (of Marazion), was appointed manager and purser, the books and accounts to be handed over to him. We are informed that the Trenow engine is to be removed once to the shaft at Wheal Charlotte, where there is a good mine. The shaft is 80 fms. in a course or ore, and that level driven west 40 fms. nearly all in a good lode and equally so in the end. In the bottom of the 70 there is a productive lode, the great length before the 80 end, and also in the bottom of the 60, before the 70 cut, the 50 a cross-cut has intersected two fine lodes, on one of which a course of ore has been opened 30 fms. in length, and still good going out. They took 140 tons of ore on Thursday, and in a few months their samplings will likely be much improved.

ST. IVES WHEAL ALLEN is stated to hold out much promise, and although the lode has failed to be productive in the 40 and 50 fms. levels, there are some good lodes which, from present appearances, are likely to become highly productive as operations are being carried on. The Caradon in the 30 is worth 12l. per fathom, and shows indications of early improvement. The engine lode is worth 10l. per fathom, and improving in depth; and a winze in the bottom of the 20 is worth 10l. per fathom. The counter lode is expected to become productive in depth, from the quantity of lode taken away by the ancient miners. Giesler's lode is large and promising, and expected to produce large quantities of tin on being more developed. The Trenow engine, all charged up to the end of April, and the mine has two excellent stone-works, every necessary machinery and other requisites, and being only in 1924 shares, was considered a fair investment at present market prices, especially as its position near the two good mines encourages the probability of some early discoveries, which will be of great value in a paying mine.

ALFRED CONSOLS.—A meeting of the committee, on the appointment of the three agents, took place, and the local impression is that the selection will meet with the approbation of the adventurers generally. They have already commenced driving the levels, the object of which is to ascertain the presumed existence of a great deposit of ore situated between the two mines of Great Wheal Alfred and Alfred Consols, in possession of the latter, the result of which is looked to with considerable interest.

VIGRA and CLOGAU MINING COMPANY: However sceptical the generality of the mining community may have been on hearing the rumours of the returns of gold from the mine, unsupported by official publicity, it is no longer a doubtful or chimerical matter when the result can be seen and handled in golden weekly profits, which the perseverance and intelligence of the executive have well warranted.

The discovery of gold in the quartz of our great mine has been a long time in the will, it is to be hoped, prove a new era in the mining interests of Great Britain, and thereby develop the vast mineral resources which our island possesses, and thus full three-fourths of the amount which, instead of being legitimately employed, the stop-gate in the pockets of promoters of limited liability companies, especially as the other foreign speculations. The Vigra and Clogau Company have been working for some time in a quiet, unostentatious manner, directing their efforts to the most economical and judicious process of obtaining the largest quantity of gold at the least possible expense. At their general meeting they declared a dividend of 10s. 6d. per share, which will make a return of 60 per cent. for the year upon the capital of 2l. 10s. per share, or an aggregate dividend of 6252s. 10d. for the 1881.

On the former day 134 ozs. were received at the office of the company, which they broke 37 fms. 1 yard 1 ft. 6 in. of split, passing 446 tons from 32 lbs. through the machinery, and obtaining 2884 ozs. 1 dw. 7 grs. of fine gold. Not yet seen the result of the first quarter's working for the year, but it is possible to learn that they are increasing their returns, and find the lode to continue in depth, and above the level. From April 5 to 15, 1882, they have taken 140 tons of ore, and produced ten weeks, which at 75s. per oz. will give 5625s. 10d. at an average of 10s. per month. On the former day 134 ozs. were received at the office of the company, which they broke 37 fms. 1 yard 1 ft. 6 in. of split, passing 446 tons from 32 lbs. through the machinery, and obtaining 2884 ozs. 1 dw. 7 grs. of fine gold. 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DEVON AND CORNWALL UNITED.—T. Neill, June 10: We have communicated the rise in the back of the deep adit level to the winze sinking below the midway level; this has given good ventilation for pushing on the level and stopping the ground to advantage. At William and Mary we have also communicated the 10 to No. 2 winze, and shall commence driving east this afternoon; the lode is worth about 3 tons of ore per fathom. No change to notice in any other part of the mine.

DEVON NEW COOPER.—F. Hawke, June 11: With a view to complete the shaft to the 98, if possible, by the end of this month, nine men and three labourers are now engaged in sinking, and I am satisfied with the progress that is made. The other operations are proceeding satisfactorily.

DOLCOATH.—C. Thomas, W. Provis, J. Tonkin, J. Thomas, June 9: South Part of Main Lode: The engine-shaft is sunk 8 fms. below the 260. A lode, which is probably the south lode, has recently fallen into the shaft; it contains a little tin, but is not of much value; this lode has just been intersected at the 254, just under old sump-shaft, by a cross-cut from the north part; the lode is not yet cut through, but is producing tin—probably worth 125. per fm. for the width seen, 5 ft. Old sump-shaft, sunk 2 fms. below the 242, is worth 125. per fm. The 230, west of old sump, is worth 185. per fathom. Dunkin's garden shaft, under the 220, is worth 255. per fm. The 220, west of Dunkin's garden shaft, is worth 405. per fm. The 210, west of Dunkin's garden shaft, is worth 205. per fm. At the 210, east of new east, we have not yet intersected the north part. Harriet's shaft, below the 200, is yielding a little tin. The 200, west of Harriet's, contains a little tin, but we are at present driving north for the purpose of intersecting the main part of the lode. The 160, west of Wheel Killas, is unproductive. At the 190 north, towards Valley shaft, we have intersected a branch containing tin, and expect to reach the main lode shortly.—North Part of Main Lode: The 266, east of engine-shaft, is worth 505. per fm. The 266, west of engine-shaft, is worth 255. per fm. The winze under the 254, east of engine-shaft, is worth 385. per fm. The 254, east of the east, is worth 145. per fm. The 242, east of the east, is worth 305. per fm. The 242, west of old sump, has reached the cross-course, and the men are now engaged in sinking a winze below the 230, on the cross-course, for ventilation, &c. The 230, east of new east, is worth 155. per fm.—North Extra Lode: The 20, west of cross-cut, north of Bule's shaft, is unproductive. We intend shortly to commence a winze under the adit, where the lode contains spots of ore, and presents a promising appearance. We would again repeat the statement made at the last account, that we only value the lode for 8 ft. in width; but we have generally found in stopping that it has been worth fully 50 per cent. more than the value given in our reports. The amount charged for the addition making to the stamps in the current cost to-day, is about 2000. We have now 452 men and boys underground, being an increase of 50 in the last twelve months. The price of tin for these two months is 11. 15s. 6d. per ton less than for the former two months, 61. per ton less than it was six months since, and 151. a ton less than for the year 1890.

EAST BEAM.—J. Webb, June 12: We have cut into the south lode 7 feet; it is of a beautiful character for tin, although this north part is of low produce; we have put a boiler hole 8 feet further, the last 5 feet was good work for tin crossing from the boring, and no south wall reached as yet, therefore we have proved the lode 15 feet wide, and letting out much water, which shows there is a continuation of a champion lode. We shall go on driving south until we reach the south wall, then commence to extend on its course, as that part is likely (from the character of the lode in the neighbourhood) to be the most productive part. So far as we have developed the mine, the prospects are very cheering indeed, having two immense wide lodes running through the sett full 3/4 of a mile, with a splendid situation, all being whole at surface, with the exception of the old streamers working a few feet deep in places.

EAST BUDNICK AND MOUNT.—Wm. H. Reynolds, June 10: The lode in the 17 west looks promising, and in a few fathoms we hope to intersect the lode met with in the cross-cut south, where it yields stones of lead. In the 17 south we have not yet cut the Budnick Consols lode, but must be very near it.

EAST CARN BREA.—T. Glanville, J. Scholier, June 11: In the 50, east of the cross-cut, the lode will yield 8 tons of ore per fm. In the 50, west of the cross-cut, the lode will yield 1 ton of ore per fathom. In the 40, east of the cross-cut, the lode will yield 3 tons of ore per fm. In the 40, west of the cross-cut, the lode will yield 1 ton of ore per fathom. In the winze sinking below the 40, east of the cross-cut, the lode will yield 3 tons of ore per fm. In the winze sinking below the 26, the lode will produce 2 tons of ore per fathom. In the 26 west the lode will yield 2 tons of ore per fm. In the 50 east the middle lode will yield 2 tons of ore per fm.

—T. Glanville, June 12: We have holed the new shaft to the rise above the 26. The main throughout is looking splendid. The lode in the 50 west is improved, and will now produce 4 tons of ore per fathom.

EAST DEVON GREAT CONSOLS.—T. Richards, June 11: I have now come from underground, and beg to inform you the lead lode is much the same as on Saturday last, producing good stones of lead ore.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, June 12: The lode in the 36 east is still worth 4 tons of ore per fm. No change to notice in any other part of the mine.

EAST JANE.—H. B. Vercoe, June 12: Western Lode: The lode in the adit has considerably improved in the last day or two; it is now about 4 feet wide, composed of carbonates of iron, quartz, and lead, and will produce the lode further north, which has caused this improvement. The lode in the back of this level will produce about 4 cwt. of lead per fm. We hope to hole the new shaft to the adit in about a month from this time; when this is accomplished it will greatly facilitate the working of this part of the mine.—Middle Lode: The lode in the adit end is about 2 ft. wide, composed of flookan, quartz, gossan, and mudi—kindly lode; this end is now driven 30 fms. We may soon expect a change for the better at this point, as the western lode began to produce lead in parallel ground to this, and this lode has presented much better appearances than the western one at the same depth.—Engine Lode: The shaftmen are engaged in sinking down pitwork, &c., and we hope to have the engine to work about the middle of next week; the water is down about 3 fms. below the adit. We have sampled this day (computed) 25 tons of lead.

EAST ROSEWARNE.—John James, June 7: There has been nothing done in sinking Hallett's shaft during the week. We have been putting down the rods and shall resume sinking about the middle of next week; this shaft is in a good lode, with every prospect of opening profitable ore ground. In the 55 east the lode is 18 in. wide, worth 165. per fm. The slope over this level is worth 145. per fm. In the 55 west the lode is 18 in. wide, producing stones of ore; we have met with a branch approaching the lode from the north, which I think will be a very valuable lode. In the 45 west the lode is 18 in. wide, ore throughout, but not rich; I think this is a temporary decline, as there is a good lode both east and west of it. In consequence of the ground being rather hard and wet, we have suspended this winze. When the 55 reaches this point we can rise against it to much better advantage. In the slope west of said winze the lode is 14 in. wide, worth 225. per fm. In the slope east of ditto the lode is 1 ft. wide, worth 125. per fm. The ground in the 45 cross-cut continues hard for driving. We consider our prospects, particularly at the bottom of the mine, to be very cheering.

EAST TREPUIS.—T. Richards, June 7: The 22 east is driven west upon Smith's lode, and is now producing a good gossan, and a little copper ore.

EAST WHEEL GRENVILLE.—G. R. Odgers, Wm. Bennetts, June 11: The lode in the engine-shaft, sinking below the 45, is 18 in. wide, and looking better for copper; we think this lode will improve. The lode in the 45 east is 18 in. wide, yielding ore and tin; as we get away from the cross-course we expect an improved lode. The lode in the 45 west is from 4 to 5 ft. wide, and producing good work for tin, worth from 105. to 155. per fathom—kindly lode. The rise above the 35 east is worth 65. per fm. The slope above the 35 east is worth 85. per fm. The lode in the winze sinking below the 35 west is worth 105. per fm. We are getting on very well with the stamps.

EAST WHEEL RUSSELL.—J. Richards, June 11: Homersham's Shaft: The 120 is suspended, and the men are put to drive north for intersection of the north or most productive part of the lode, as proved in levels above. In a new, or Viger's, rise in the back of the 120 east the lode is 1 1/2 ft. wide, composed of quartz, prlan, flookan, and good stones of ore occasionally. In the cross-cut south, at the 110 east, the ground is becoming much more easy for progress, and from the appearance of the ground, as well as the influx of water, the south part of the lode will probably soon be met with. In Fawin's cross-cut, at the 110, the drive is still being continued north through the lode, which consists of capel, iron gossan, and a small proportion of malleable copper. In the 100 east the lode is from 2 to 3 ft. wide, composed of capel, quartz, prlan, and good stones of ore. In the 80 east the lode is 5 ft. wide, composed of capel, quartz, prlan, and good stones of ore. In the back of the 65 the lode is 5 ft. wide, composed of capel, quartz, prlan, and occasional good stones of ore. In the 88, west of Hitchins's shaft, the lode is 2 ft. wide, composed of capel, quartz, prlan, flookan, and a little grey and black ore.

FRANK MILLS.—J. P. Nicholls, J. Cornish, June 11: In the cross-cut west from the 84 north we have intersected a branch 6 inches wide, composed of white iron, with good stones of ore in it. The west branch, in the 73 north, is looking better than last reported, and is now yielding some good saving work. The 60 north, on the same branch, is still looking extremely promising, yielding lead ore, but not, however, quite so much as last reported. In the cross-cut driving east from the 4 north we have intersected a branch 8 in. wide, consisting principally of barytes, with a little lead ore. The 45, south from air shaft, is still productive, and will yield 3/4 ton of lead ore per fm. We are putting up a rise against this level from some old workings in the back of the 60, for ventilation, &c.; here the lode is also productive to the amount of 7 or 8 cwt. of lead per fm. The slopes in the back of the 84 are not looking quite so well, but those in the back of the 72 and 60 are without any particular change since last report. The tribute department, also, is without much change.

GAWTON.—G. Rowe, June 7: There is no change in the appearance of the lode in either point of operation since last reported on. During the last few days the men have been principally engaged in securing a run which took place between the 50 and 30, and stopped our ventilation, but it is now completed and in good condition. We now purpose to thoroughly cut through the lode in the 36 west, in order to ascertain its entire width and value. I will furnish you with the setting report next week.

—George Rowe, June 9: Saturday last being our monthly setting-day, the following bargains were let:—A cross-cut to drive south at the 36 west, for four men, at 55. per bargain; sent 1 fm., or cut through the lode. A piece of lode to take down as per bargain, by two men, at 35. 10s. per fm. The slopes in back of the same level to carry all the lode not taken. All the wheeling and tramming in the mine for one month, by two men, at 55. 15s. All the filling and landing for one month, at 75. 5s. A pitch in back of the 36, by two men, at 13s. 4d. in 12.

GREAT BRIGAN.—T. Trelease, G. Oates, June 7: We completed our plunger-lift yesterday, and put the engine to work about 12 o'clock; it works very well indeed, and hope to get the water in for again by Monday next. We shall put our old lift to work in order to go on forking the mine to a deeper level. There is nothing particularly new to report on this week, as most of the underground men have been engaged to captain. The water is now drained at trial and whim-shafts; we intend to commence operations here on Monday. We have let the masonry for the new steam-whim and all other buildings required this day at 85d. per perch.

GREAT NORTH DOWNS.—T. Trelease, June 7: The shaftmen have put in boars for the plunger-lift, and are now engaged cutting ground for the clister-plat, which we hope to complete next week. The coming water is about five strokes per minute. Nothing else new since our last report.

GREAT ONLOW CONSOLS.—G. Nickard, June 10: In the 122 east the ground is a little stiffer, but is, nevertheless, favourable for opening. There is nothing fresh to report relative to the lode. There is no change to notice in the 122 west.

GREAT REPELLACK.—W. H. Reynolds, June 10: We have re-set the shaft to be sunk by eight men, at 125. per fm.; the part of the lode in the shaft is composed of spar, blande, lead, and copper, but not enough of either to value at present. The 55 east and west is set at 305. per fm.; the lode in the eastern end is promising, and in the western end we are still driving by the side of the lode.

GREAT SOUTH TOLGUS.—J. Daw, June 11: The summer are still employed in cutting the clister-plat, and in preparing to fix the new pitwork; it will take us about a week or ten days longer to complete, and then we shall commence sinking again. The lode in the 140 east is 1 1/2 ft. wide, unproductive. In the 100 west the lode is much the same as last reported, producing 3 tons of copper ore per fm. On Saturday last we sampled 113 tons 4 cwt. of tin, which is of good quality; and we have about 70 or 80 tons more at present sample.

GREAT WHEEL BARRAGE.—J. Hampton, J. Jenkin, June 11: We got to the bottom of the shaft on the tin lode to-day, but in one place only; it is about 7 fms. below the surface. My next week we shall be able to clear up the shaft and workings, and bring to surface some of the lode, and sample it to test its value; we may state, however, that the lode is very compact, about 3 ft. big, and it has a very promising appearance for tin,

consisting of peach, &c., the usual compound in this district for productive tin lodes; the lode is taken away each side of the shaft for tin, and we have a good opinion of it for working. At Hill Brothers shaft the cross-cut is gone through a small branch, but, contrary to the rest, it underlies such the way we expect to find the lode. The water still increases a little.

GREAT WHEEL BUSY.—J. Delbridge, R. Giles, T. Richards, June 7: In the engine-shaft, sinking below the 120, the lode is 3 1/2 ft. wide, yielding good stones of tin, with a kindly appearance. In the 120 west there is no lode to value. In the 120, east of Offord's, the lode is small. Offord's shaft, sinking below the 120, no lode to value. In the 110, east of ditto, the lode is 5 ft. wide, yielding about 4 tons of ore, with 15 tons of tinstuff of low quality. In the 100, east of ditto, the lode is from 7 to 10 feet wide, yielding 8 tons of ore, with tinstuff. Wesley's winze, below the 100, is yielding 7 tons of ore, with tinstuff throughout. Levitt's winze, below the 100, is worth for tin and copper from 205. to 255. per fm. In Coleman's winze, below the 90, the lode is 5 ft. wide, worth for tin and copper 105. per fm. At Mathew's shaft the lode is discovered by the cross-cut, yielding stones of ore, with a very price tinstuff. In the 90, east of the cross-cut, the lode is from 5 to 6 or 7 ft. wide, unproductive. In Mathew's winze the lode is from 3 to 4 ft. wide, but not to value. In the 100 cross-cut, west of Fiddling's, we have cut a branch or lode; we purpose driving west from this cross-cut to prove its value. In the 80, west of Pinniger's, we are rising against King's shaft; the lode is 5 ft. wide, but not to value. In the 70 cross-cut, north of King's, there is no change to notice. In the 50, west of Black Dog, the lode is very large, no spots of ore, not to value.—Boscawen's: We are drained complete to the 60 lift, and are now progressing to drop to the 70 with a 155-in. lift, which will be in readiness to drop in ten days or thereabouts. We are also pushing on all other works for this purpose. We are sinking Kitebole's shaft below the 60, also rising above the 60 to communicate with all speed. We are cutting down and securing Hunter's shaft for flat-rods, all disparting. In the 30 cross-cut south the ground is favourable. Other works are progressing satisfactorily.

GREAT WHEEL MARTHA.—H. Rickard, June 11: Saturday last being our general setting, the following pitches and bargains were set:—Tribute: Ten pitches, by 26 men, at an average tribute of 9s. in 17.—Tutwork: The 52 east to cross-cut south through the lode, by six men, at 105. per fm. The 52 west, by the side of the lode, by four men, at 35. 5s. per fm., stented 4 fms. The 40 west to cross-cut through the lode, by two men, at 35. per fm. A winze to sink below the 40 east, by six men, stented the month. Pinner's winze, below the 20, west from Thomas's shaft, by six men, stented the month, at 65. per fm. All the tramming from the 52, 40, and 20 fm. levels, by three men, at 105. per month. All the filling and landing at Thomas's and engine-shafts, by two men, at 155. 10s. per month. We have cut into the lode at the 52 east about 10 ft., and not yet through it; from the last 3 ft. driving fine stones of ore have been broken. The lode in the present end is composed of spar, mudi, and copper ore—a very kindly appearance. The lode in the winze sinking below the 40 is producing good work for copper ore, worth about 5 tons per fm. for length of winze (9 feet). In cross-cutting the lode at the 40 west we find it divided by a horse of Killas, about 6 in. wide; the south part of the lode, which is not yet cut through, is producing stones of copper ore, with a very kindly appearance. The lode in the winze sinking below the 20 is producing occasionally stones of copper ore, with a quantity of mudi; this lode has improved during the past week, with indications of a still further improvement. There is no alteration in the tribute department since last week. I hope to get the whim-engine connected with drawing from the engine-shaft, by the middle part of next week, all being well. I have forwarded samples by this post of the last parcels of copper ore, for sale on the 19th inst.

HAWKMOOR.—J. Richards, June 10: The lode in the 50 west is about 2 ft. wide, composed of quartz, capel, mudi, and good stones of ore occasionally. The lode in the 30 west is 9 in. wide, composed of quartz and capel principally. The slopes in back of the 25 east are for a time suspended, and the men put to stop the back of the 30, west of Rowe's rise, where the lode is worth 1 1/2 ton of ore per fm.—West Hawkmoor: In the adit level, driving west, the No. 3 lode is small.

HINGTON DOWN CONSOLS.—T. Richards, June 11: There is nothing new to advise you of this week. The 110 west continues to be worth about 105. per fm., and promising improvement.

HOLMBUSH.—June 11: In the 175, east of shaft, the ground is better for progress as we are driving towards the slide, and also more mineralised than hitherto; from the appearance we expect a change shortly for the better. The lode in the 160, west of shaft, is yielding good stones of copper ore. The winze sinking below this level (160), west of the lead lode, is worth 3 tons per fm. No. 2 winze, west of the lead lode, is a little improved since our last, now worth full 205. per fm. In the 20, east of Wall's shaft, flap-jack lode, the lode is 3 ft. wide, composed of mudi, spar, capel, with good stones of black and yellow copper ore occasionally. In the 40, east of shaft, the lode is 2 ft. wide, yielding good stones of copper ore occasionally. Our tribute department is looking much the same; Friday next being setting-day, we will send more particulars. We have on the mine dressed and undressed above 25 tons of lead and 300 tons of mudi.

LADY BERTHA.—J. Metherell, June 10: The lode in the 53 east has improved; it is full 8 ft. wide, composed of peach, mudi, and ore, worth of the latter 1 ton per fm., and the end very wet; this we consider very promising for a further improvement; in the same level west we have cut through the lode, which is 1 1/2 ft. wide, principally of hard quartz, mudi, and some stones of ore. In the 41 east the lode is small, but the end is looking very rich, and in the 20 west the lode is improved, and is producing good work, but cannot speak of its value, as it is not yet cut through. In the 30 east the lode is very wide, full 5 ft., carrying a leader of mudi 3 ft.; the other portion of the lode is composed of quartz, peach, and ore, worth of the latter 1 ton per fm.; this end is very promising. The slopes in the bottom of this level are worth 3 tons of ore, or 95. per fathom. The pitches throughout the mine continue much as usual, except the pitch in back of the 10, which has improved, now worth full 205. per fm.

—J. Metherell, June 12: The eastern engine-shaft is sunk about 19 fathoms below surface; cased, divided, and ladder-rod to bottom. The whim is erected, and goes on well. We have nothing new in the mine since I wrote you on Tuesday last, except in the 30 east, where we have taken down a piece of the lode further north, which is producing good work, but cannot speak of its value, as it is not yet cut through.

LLYWERNON.—M. Barbary, June 12: The 40-foot wheel is doing its duty well, considering the small lift of pump in the shaft; we are reducing the water therein steadily, but there are long levels below to empty: the water is now 13 fms. from surface. The embankment and other surface operations proceed satisfactorily.

LOWER PARK.—W. Davies, June 12: The ground in Stuart's shaft continues hard for driving; no alteration in the character of the ground. The 40 yard level, driving for tin, is looking better, with no alteration. No. 1 rise is producing a little lead, but not enough to value. In this end we hope soon to see a change. In the 30 east the slope is in the back of the 30, east of Stuart's shaft, has been suspended for the present, and the men have been put to drive out a cross from the 40 yard level to intersect the south part of the lode, which if it answers expectation will be a great improvement to the mine. The rise in the back of the 26 yard level is without alteration since last report. The men are making good progress in clearing and repairing the 33 yard level.

MAUDLIN.—W. Treagay, June 7: The engineer and myself went on the mine yesterday and marked out ground for engine-house, which will be set to build as soon as the tenders are required, and excavated a piece of the lode further north, which is producing good work, but cannot speak of its value, as it is not yet cut through.

MOLLAND.—T. Bennetts: We have done nothing towards cutting through the north part of the lode at the 62 since last reported. In consequence of the water being quick, we have been obliged to fix the lift, which is now completed, and the engine draining from the bottom of the shaft. The shaftmen are now engaged in dividing and casing the shaft, fixing ladder-rod, &c., which will take them this week to complete, when no time shall be lost in cutting through the lode at the 62. The slopes in back of the 42 east are producing 1 1/4 ton of ore per fm., with a prospect of improvement. The slopes in back of the 40 east are at present producing about 1 ton of ore per fm.

NORTH BASSSET.—Thos. Glanville, G. Davey, June 11: In the 102, west of Lyle's shaft, the lode is 2 1/2 ft. wide, composed of spar, mudi, and stones of copper ore. At Grace's shaft the north part of the lode is 2 ft. wide, producing for the length of the shaft 1 1/2 ton of copper ore per fm. In the 92, west of Grace's shaft, the lode is worth 85. per fm. for tin. In the 82 west of Grace's shaft, the lode is producing good stones of tin.

NORTH BULLER.—J. B. Delbridge, June 7: In King's flat-rod shaft, sinking below the 65, the ground is favourable for sinking; the lode in the shaft is from 12 to 14 in. wide, composed of quartz, iron, mudi, and letting out more water than it has been for some time past. The ground in the 78 cross-cut north, towards King's shaft, is a little better than when I wrote you last. All other things are much as usual.

NORTH DOLCOATH.—J. Vivian, J. Paul, June 9: The lode in the 47 east is from 3 1/2 to 4 ft. wide, kindly in appearance, and looks likely to improve, worth rather over 45. per fm.; set to drive at 85. 10s. per fm. In the same level west the lode is about 8 ft. wide, and produces occasionally stones of ore; set at 25. 15s. per fm. The engine with the pitwork are all in good order.

NORTH DOWNS.—June 11: King's engine-shaft is down nearly 8 fms. below the 60, the lode in which is from 1 1/2 to 2 feet wide; in the centre of the shaft there is a good branch of ore, worth full 1 ton per fm. The 60, west of King's, is producing good stones of ore, but not at this time to value. The 60 east is improved in appearance, producing good stones of ore; this end is very near No. 2 winze, which is down within 9 feet of the level, and worth 185. per fm. The 50, east of King's, since our last report intersected the elvan; we think it right to mention this is the first elvan we have seen east of Bennett's cross-course, and may be regarded as a very important feature, being precisely the same character as that to the west of the cross-course, in and about which we had our large courses of ore; this end is now about 10 fms. from Bennett's shaft, near which we may expect to cut the north part of the lode. In the 40, east of Bennett's shaft, no lode has been taken down since last report, worth 145. per fm.; the rise in the back of this level is communicated with the winze sunk from the 20; the slope in the back of the level is worth full 145. per fm. We shall at once commence a winze 11 fms. in advance of No. 2 winze, below the 50, in a good course of ore, worth 605. per fm. Nothing new in any other part of the mine.

NORTH GREAT WORKS.—J. Pope, June 10: The lode in the 10, east of Thomas's shaft, is 2 ft. wide, worth about 45. 10s. per fm., a very kindly lode, and the pitwork are all in good order.

NORTH JANE.—J. Evans, June 10: Kerr's shaft is sunk 8 fms. below the 12; the lode is 3 1/2 ft. wide, worth 155. per fm. There are three pitches in back of the 12 working at an average tribute of 10s. 6d. in 17., producing good work for tin, especially the one east of shaft, which is worth 155. per fm. The new shaft is completed to the 12, and is now sinking below, at 125. per fm.; lode large, with a very kindly appearance, but

we have not opened sufficiently on it to report its value.—Gossan shaft: There are no pitches east and four west of this shaft working at an average tribute of 11s. in 17., and the men can get fair wages.—Footway Shaft: There is a pitch to the north of this shaft in the adit level, on a parallel lode, and no doubt by driving a short cross-cut to intersect this lode can be cut, and, from the indications above, will eventually prove a very profitable piece of ground. Having considerably reduced our merchant's bills, and the improvement made at the floors, together with some recent alterations in the dressing of our tin, we trust will, in a little time, place the mine out of that very unsatisfactory position it has been its bad luck to occupy for some time past.

NORTH LAXEY.—R. Rowe, June 10: The new engine-shaft is down 3 fms. 4 in. below the 38; the lode in the south end, and for two-thirds the length of the shaft, is 3 ft. wide, composed of quartz, black jack, and lead; of the latter it is worth 1 ton in the fathom—a more promising or steadily improving lode as we go down towards the bottom, in any mine. In the 38 end, driving south, the lode is split into two parts, one which is now a space of 15 ft., each, containing ore, but not to value. We are driving on the eastern part; it is, however, difficult for the present to say whether the two is the principal one, and, therefore, is a matter of little anxiety just now; I shall see it again in a few days. In the winze sinking below the 27 the lode is 3 ft. wide, worth 12 cwt. of ore per fm. We are sinking this for ventilating the 27, as well as to open the ground for stopes.

NORTH MINERA.—June 11: The 45 end east is producing ore worth about 105. per fm.; the slope in back of same is worth 155. per fm. The canter lode north of 105. per fm., worth 205. per fm.; this lode south is producing saving work, but is not so clearly advanced to be driving the whole of the level upon it; at present it is only about 2 ft. wide, we are carrying upon it. The ground being taken away in the 25 the lode is on the side of the shaft is rather better than for some time past, and the men are earning good wages at 65. per ton. The cross-cut driving south-west of shaft is the most improved, and producing very good stones of lead. The 15, west of eastern shaft, is producing looking very promising, and worth 155. to 205. per fm. The slope on the north side of the level west of shaft is looking very well, and producing about 155. per fm. We sold on Monday last, to Messrs. Walker, Parker, and Co., 25 tons of lead ore, at 125. 6d. per ton, which we have this day weighed off, and delivered into the way truck; this is a little increase, and will leave us a profit. As soon as we can, we shall send the eastern workings with Pugh's hope to do better.

NORTH PORTHILL.—G. Rickard, June 10: In the engine-shaft the ground is very moderate for being spent, and very satisfactory progress is being made in sinking; the nature of the ground about the lode is a very beautiful killas, and has made it in the present to let one only the tribute for which is 21. 15s. per ton for the ore, and remaining only 155. per ton for the lead ore, it will be seen that the above tribute is very low one. I should have added that the tributors are getting good wages. The average value of the lode in the engine-shaft enables me to state that it will stop as quick as low tributes as the pitch (21. 15s. per ton for lead ore), or even less. The men that we have not let other pitches is that we consider the lode can be stopped away from the bottom of the shaft, and the lode in the back underhand, which is a young lode, and when it is considered that a parallel lode of great strength and size, which yields large lumps of lead ore of several pounds in weight on the back cuts, is only about 23 fms. distant from this, which can be cross-cut to in a few weeks, and which is very likely to prove equally as productive as the lode we are now working on, there can be no hesitation on my part in stating that the prospects of the mine are not only satisfactory but highly encouraging. The geological position of the mine, relative to its proximity to the limestone, is no doubt favourable. We shall have small parcels of ore ready to sample in about a week.

ROSEWARNE CONSOLS.—J. Vivian, R. Angrove, F. Hosking, June 11: There is nothing new in this mine since last report requiring particular notice, with the exception of the 184 west, which was then reported to be worth 255. per fathom; it is now worth 305. per fathom.

NORTH WREY.—T. Kemp, June 12: During the last few days we have had very heavy rain here; we have now sufficient water to work the wheel, and if this weather continues on for a few days we shall soon get the water in level. It will be useless for us to commence the erection of the steam-engine before more settled weather.

PAR CONSOLS.—F. Puckey, T. Rich, J. Hosking, June 9: Eastern, or Copper-Trey's Lode: In the 80, west of Treffy's main-engine shaft, we are driving a cross-cut to cut the lode cross-course. We expect to reach the lode in a few fathoms further driving, which we hope to accomplish by the end of this month. In the 100, east of the cross-cut, the lode is 3 ft. wide, producing saving work. In the 135 west the lode is 5 ft. wide, composed of quartz, prlan, mudi, and good stones of copper ore, and looking promising for further improvement. In the 145 west the lode is 2 ft. wide, but still poor. The water is issuing very strongly from the adit, and we calculate to be near the intersection of the north lode. In the 180 east the lode is 2 ft. wide, worth 155. per fm.—North Lode: In the 110 east, west of Treffy's main-engine-shaft, the lode is 3 ft. wide, worth 205. per fm. In the 120 east the lode is 1 1/2 ft. wide, presenting a very kindly appearance, and producing occasional stones of good quality ore. In the 150 east we have just cut the lode east of the cross-course, which is small, poor, and poor.—Western, or Tin Part—Puckey's Lode: In the 115, west of Puckey's north shaft, the lode is 6 ft. wide, producing a little tin, but not sufficient to value. In the 135 west the lode is 2 ft. wide, producing saving work, and looking kindly for improvement. The lode in the winze sinking below the 100 east is 1 1/2 ft. wide, worth 255. per fm. The lode in the winze sinking below the 110 east is 1 1/2 ft. wide, worth 125. per fm.—Trial Shaft: We have completed the sinking of this shaft to the 55 on the course of the lode, and have commenced driving east on its course. The lode in the end is discovered by a cross-course, and is 1 ft. wide, but poor. In the 100 east, the lode is 3 ft. wide, worth 205. per fm. Our stopes and pitches are producing about the usual quantity of tin.

PEDNAN-DREA UNITED.—W. Treagay, J. Thomas, June 7: The lode in the bottom of the sump is worth 165. per fm. for the length carried, 14 ft.—sinking level. The 110 west end is worth 85. per fathom. The 110 east end is not so good as it has been, worth 105. per fm. The winze in bottom of the 100 east, in advance of this end, is improved, worth 205. per fm. for the breadth carried, 6 ft., and no north wall. The 100 east men being employed clearing their stuff, no progress has been made for driving for tin; the 100 west end is worth 85. per fm. The 50 west end is yielding saving work for tin; for tin, and for present clearing, the 90 rise is poor. In the 50 west end, on Skinner's lode, is worth 85. per fm. for tin and 1 ton of copper ore per fm.—Collier's Lode: The 80 west end is worth 75. per fathom. The 65 east is worth 85. per fm.—Street and Bragg's: In the 47 east the lode is 2 ft. wide, improving in appearance, and promising for the production of tin. In the 40 east the lode is divided into branches, which are being deused, standing on each side of the end; none taken down since last report, but the Sparrow: The water is in fork to the 20, and we have got down into that level, but the Sparrow, &c., prevent much exploration until it is cleared. By the shaftmen are making good progress in clearing the shaft, and the men in the adit in clearing that level. Good progress in clearing the shaft, and the men in the adit in clearing that level. The 142, 130, or 118 fm. levels during the past week. The lode in the 118 south is 3 ft. wide, composed of iron, mudi, copper, and tin; we have not broken enough of the lode to prove its value; I will advise you in my next report. In the 82 north the lode continues much the same as last reported; the ground is more favourable for driving. In other parts of the mine there is no change to notice.

PENHALLS.—R. Fryer, senr., Wm. Higgins, June 7: The lode in the engine-shaft, sinking below the 30, continues much the same as for some time past. We shall resume driving the 40 by the end of next week. The 30 west end is yielding saving work for tin; for tin, and for present clearing, the 90 rise is poor. In the 50 west end, on Skinner

and will commence to drive the end again next week. In the 46, east shaft, the lode is 2 feet wide, with occasional stones of copper ore. In the 44, east shaft, the lode is 1 1/2 feet wide, producing a little ore, but not sufficient to interest the Rosewater Consols; the shaft is perfectly dry and deep, and will be used to cut the lode before having any water from present appearances. (See page 398.)

WHEEL FROSE.—J. Richards, June 11: The new engine-shaft is down to the 10; here we have intersected our north and south lode, which is 2 ft. wide, composed of blue granite and carbonate of iron; altogether, it is a very promising lode, and likely, from good stones of silver ore, to improve shortly. The shaftmen will timber down the shaft in great haste, and we shall commence to case and divide and erect the whim before we get our works for sinking on the course of the lode. We are pushing on all our operations as fast as the weather will allow us.

WHEEL FROSE.—J. Richards, June 10: Dunn's cross-cut north, at the 62, of the shaft, has been driven 5 fms. 2 ft., and a branch or portion of the lode of the shaft, the lode is 1 1/2 ft. wide, producing a little ore, but not sufficient to interest the Rosewater Consols; the shaft is perfectly dry and deep, and will be used to cut the lode before having any water from present appearances. (See page 398.)

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their longitudinal bearing will form a junction about 70 fms. to the west of our engine-shaft; therefore, it is more than probable that our cross-cut is now draining the No. 2 lode, as well as the lode just intersected. I hope to be able to report to you fully in my next the nature and size of the lode. The lode in the level driving towards the old tin shaft is gradually improving, and is producing some very good stones of tin. We have a pile of tin stuff already at surface, which we are using for the course of dressing. Other parts of the mine are without alteration. All our machinery is in good condition, and working well.

TRELOWETH.—T. Richards, June 12: In driving the 144 cross-cut south through the lode, it contains good stones of copper ore, but we have not yet got far into the lode, which is rather hard. In the 134 end, west of Cole's shaft, the lode is worth 150 per fm. The winze sinking below the 134 continues to be worth 200 per fm. They have not cut through the lode in the 134 end, neither has the lode improved in value for copper ore. We have got into it 18 ft., and not yet cut the south wall. In driving the 124 end north there is no lode of value met with. The pitches are looking much the same as for some time past.

TRELOWETH.—June 10: The engine-shaft has been sunk 4 ft. 6 in.; the ground is not so favourable, and our progress is slow in consequence of having two lifts in the shaft, and the water still being very quick; we shall have to sink 9 feet more in the shaft to enable us to put in bearers, fix claters, &c., for the new pitwork; and in order to accomplish this more speedily we have placed nine men in the shaft. We have thought it advisable to adopt this course, and so fix both lifts at one time rather than to fix them separately. The greater part of the pitwork is on the mine. The 30 south has been driven 4 fms. In the end we have a slide, which we think is the same that was met with in the 134 end, and south of which the lode became productive in that level; the slope in the back of this level will produce 4 cwt. of lead per fm.; and the slope in this level north will produce 2 cwt. of lead per fm. Every exertion will be used to get the shaft down as quick as possible to fix the new pitwork, and enable us to resume the 30 cross-cut east.

TRIMLEY HALL.—June 11: We have commenced driving a cross-cut in the alt level, to unwater the engine-shaft, in which the water was too quick to allow us to sink. We shall get the engine erected as soon as possible, when we shall be enabled to follow the ore seen in the sink below the alt.

TREVENEN AND TREMENEER.—J. Medley, W. Tippett, June 10: The lode in the Trevenen engine-shaft is worth 350 per fm. In No. 1 stop, at bottom of the 170, east of the shaft, the lode is worth 120 per fm.; No. 2 is worth 150 per fm.; No. 1 stop, in back of this level, is worth 110 per fm. The lode in the 170 end west is reduced from 4 ft. to 1 ft. in size, and the ground greatly eased; we like these changes, and we believe we are approaching a productive run of ore ground here. We are still clearing the 160 west, which yields a little tin from the slope in the bottom. We have been obliged to suspend the 150 west on account of the powerful stream of water flowing from the back; but I am glad to say we have not lost the ground we have driven. We are making fair progress at Tremeneer shaft, but the branch is poor. Our tributors are all increasing; we have now sixteen pitches, worked by thirty-six men, at an average tribute of 3s. 4d. in 12.

TRUMPET UNITED.—G. R. Odgers, June 7: A bargain for six men to sink the engine-shaft 9 ft. below the 38, fix the claters, standing lift, and bring down the main rods, as per bargain, 220. The 38 west, to four men, at 40 per fm.; lode at present small, but looking at the lode in the 25, I am expecting a change shortly. The rise above the 25 west, to four men, at 70 per fm.; lode 1 ft. wide, worth 120 per fm. The winze below the 15 west, to four men, at 80 per fm.; lode 10 in. wide, worth 120 per fm. The shaft to sink on Wheal Ann lode, at 550 per fm.; lode 1 ft. wide, producing saving work. It is kindly working. The staff at the stamps is yielding tin equal to our sample. **VALE OF FROSE.**—W. Pryor, T. Grefall, June 10: In the 110, driving south of great cross-course, the lode is small, and not to value; the end is now forth to a type of hard ground, and we calculate on having a small unproductive lode for the next 5 fms. or 6 fms. In the 100, driving south of Field's shaft, the lode is 2 ft. wide, yielding blende and stones of lead ore. The slope in back of the 90, south of said shaft, are much as usual. In the new adit, south of Nant, the lode has a promising appearance, ground being favourable for progress. Jones's pitch, in back of the 80, north of Bonville's shaft, is worth 12 cwt. of lead ore per fm. Trowson's pitch, in the 70 north, is worth 10 cwt. per fm. Lewis's pitch, in the same level, is worth 15 cwt. per fm. Poole's pitch, in the 60 north, is worth 10 cwt. per fm. W. H. Pryor's pitch, in the 50 north, is worth 10 cwt. per fm. Hughes's pitch, in back of the 50 north, is worth 10 cwt. per fm. Fowell's pitch, in the same level, is producing 9 cwt. per fm. Paul's pitch, in the 20 south, is worth 1 ton per fm. Trehan's pitch is worth 12 cwt. per fm. Other pitches are rather poor.

WENTNOR (Pantass).—J. Kemp, June 12: I am glad to inform you that the water has again left us, and the men have resumed operations; in the 92 yard level the ground is still very hard, and the lode is small at present, but I am expecting daily to see it increase. I am glad to inform you that the company who are working a shaft for us, as it is on the same lode, and close to our boundary.

WEST BASSET.—W. Roberts, June 11: We have resumed sinking, by nine men, Thomas's engine-shaft under the 134, which is down 6 fms., in it the lode is 5 ft. wide, composed of chlorite, fluor-spar, mende, and occasional stones of yellow copper ore. In the 114, west of Percy's shaft, the lode is divided into two parts, the north part producing 1 ton of ore per fm., the other part is at present unproductive. In the winze sinking under the 104, which is about 8 fms. beyond the 114 end, the lode is 3 ft. wide, producing 3 tons of ore per fm. In the 104 west the lode is small. In Grenville's engine-shaft, under the 104, the lode continues 2 ft. wide, producing for the length of the shaft about 450 tons of ore per fm. In the 78 west, the lode is 1 ft. wide, with good stones of ore—tribute copper, &c. In other parts no alteration to notice since last reported.

WEST CARADON.—W. Johns, R. Trathan, J. Williams: Our pay and setting went off as usual. There is nothing particularly new since last reported, with the exception of the 80 east and 60 west, on new lode, which are looking better. A north branch is coming in Pryor's shaft, which looks very promising for doing something good in depth.

WEST DEVON.—Edward James, June 12: The south engine-shaft is now down 8 fms. below the 40 fm. level; the ground still remains good for sinking, and our men are doing their best to get down to the 50 by the end of this month. The lode in the 50 is about 450 tons of ore per fm. In the 78 west, the lode is 1 ft. wide, with good stones of ore—tribute copper, &c. In other parts no alteration to notice since last reported.

WEST FAR.—W. Woolcock, June 12: The lode in the 65, east of Dawken's shaft, is still divided by a horse of kilas; but is increasing in size, the south part being now 2 ft. wide, composed of spar, apatite, and peat, containing a little tin. Although the lode does not contain much tin in the present end, there is a pitch working about 3 fms. above immediately above it, and the lode averages 2 1/2 cwt. of tin to the 100 sacks, a very promising lode. From these indications we may shortly expect an improvement here. The tribute pitches are still producing large quantities of tin stuff, averaging about 2 cwt. of tin to the 100 sacks.

WEST POLMAR.—R. Hancock, W. Body, June 10: We are driving east and west on No. 4 lode, which is about 1 ft. wide, the ends of which are being driven for 500 per fm. We are also driving on No. 3 lode, east of cross-cut, by six men; the lode is about 2 ft. wide, composed of spar and mende; the end is driving at 500 per fm. The rise in back of the 20, on the north lode, is 3 fms. above the back; the lode is about 2 feet wide producing tin and mende; the price for rising per fathom is 25s. The cross-cut is driven south of No. 4 lode about 18 fms., at which point we have intersected a branch about 6 in. wide, with spots of copper; the ground in the end is good, driving at 600 per fm.

WEST SOUTH CARADON.—J. Williams: We are still continuing our usual mode of working the adit level, west of Page's shaft; it is proving a kindly appearance. We are driving the cross-cut north of Page's shaft, where the ground is easy for exploring.

WEST WHEAL JANE.—J. Tonkin, J. Smith, June 7: The 70 west is a little improved; the lode is 6 ft. wide, producing some good tin stuff. In Painter's shaft, below the 20, the lode is 8 ft. wide, worth 550 per fm. In the 20, west of this shaft, the lode is 8 ft. wide, worth about 600 per fm. In the winze under the 10, west of this shaft, the lode is 6 ft. wide, worth 500 per fm. In the 10, west of this shaft, the lode is 4 ft. wide, worth 100 per fm. We have just commenced sinking Vonnab's shaft, below the adit, in the mine, where we expect an improvement in a few fathoms sinking. We suspect about 450 tons of ore per fm. In the 78 west, the lode is 1 ft. wide, with good stones of ore—tribute copper, &c. In other parts no alteration to notice since last reported.

WEST WHEAL TREVELYAN.—J. D. Osborn, June 7: Since our last report the engine has been idle, in order to cleanse and make some little repairs, consequently the water has been in for several days; therefore we have nothing new to report on our underground operations this week. The engine is again working satisfactorily—the water in fork, and the men have again resumed their respective places.

WHEAL AGAR.—W. Roberts, June 11: In the 90 east the lode is 2 ft. wide, improved in appearance, and producing stones of ore; in the same level, driving west, the lode is 1 1/2 ft. wide, promising, but at present not producing any ore. In the 50 east, the lode is 1 ft. wide, producing stones of ore; the same level west produces stones of ore; lode 1 ft. wide. The slope in back of the 80, and the tribute pitches in the other levels, are turning out tolerably well.

WHEAL ARTHUR.—T. Carpenter, June 12: There is no particular alteration in the mine since last week's report. Edward's lode, in the adit level east, is 4 feet wide, yielding good stones of copper ore. The different stops on the old lode are yielding just the same quantity of ore as they have for some time past.

WHEAL CUPID.—R. Pryor, sen., June 6: The lode in the 55, east of the engine-shaft, has undergone a favourable change, it now 4 ft. wide, 3 ft. of which is composed of spar and mende, and for 1 ft. lode, in the north of this level, is composed of spar and grey copper ore, yielding 1/2 ton of the latter per fathom; set to six men, at 40 per fathom.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, June 7: We are making as much progress as we possibly can with the sinking of the engine-shaft below the 110. The lode in the 110 west is 2 ft. wide, 18 in. of which is a good branch of ore, worth 300 per fm. The lode in the 100 west is 20 in. wide, and yielding from 1 1/2 to 2 tons per fathom; the lode in the south part is from 8 to 10 in. wide, and producing 1/2 ton of ore per fathom. The lode in the 90 west is from 18 to 20 in. wide, and yielding 2 tons per fathom. The lode in the 80 west is 18 in. wide, and yielding 1 1/2 tons per fathom. The lode in the 50, east of cross-cut, is from 5 to 6 ft. wide, yielding good work for tin, worth 300 per fm. The lode in the rise above the 80 is from 4 to 5 ft. wide, and producing good tin work. The pitches are looking much the same. Altogether, we think the prospects of this mine are very cheering.

WHEAL HARRIET.—S. Williams, June 7: The engine-shaft is without change to notice during the week. The shaft is still continuing to sink from surface; ground continues soft. We have about 3 fms. more to rise above the adit to effect a communication with Alexander's shaft. Nothing done to the lode in the rise for the week. Alexander's lode, in the deep adit, has improved, now worth 120 per fm. The lode in the slope above the deep adit is worth 100 per fm.

WHEAL HOPE.—W. H. Reynolds, June 10: In the 28 west the lode is now spotted with lead, and likely to improve. We shall begin clearing the 38 to search for the south lode to-morrow. On Monday next we shall sample 10 tons of lead, which we think of good quality.

WHEAL NORRIS.—J. Nance J. Andrews, June 7: The driving of the cross-cut at

the 35, south from the Cremorne engine-shaft, is progressing very satisfactorily. The cross-cut at the 15, south of No. 5 lode, and east of Cremorne engine-shaft, is at present a little harder than it has been, and not letting out so much water. The sinking of Carter's shaft, is progressing at about the same rate as for some time past. The rise in back of the 15, east of Carter's shaft, on No. 4 lode, is up from 13 to 14 fms., and we expect to hole to the adit in two or three days; when effected, this part of the mine will be well ventilated. The No. 3 lode in the 15 end of Carter's shaft, is showing a better appearance, and yielding some good stones of tin. In the 15 cross-cut, north of Carter's shaft, we have intersected Vivian's lode during the past week, which shows at this point a kindly appearance; it is 3 1/2 ft. wide, composed of apatite, quartz, and prisms; we purpose at once to open on its course west of cross-course. In driving the adit level on Vivian's lode it shows an underlie of about 1 ft. per fm., consequently we expected to have about 3 fms. to drive at 15 to 16 to intersect it, but having cut it so soon, shows it to be about vertical between the adit and the 15.

WHEAL FROSE.—E. Blewitt, June 12: The lode in the 40 east is 2 feet wide, worth 160 per fathom for tin, and letting out water freely, which is regard as a good indication. The winze sinking below the 30, about 25 fms. in advance of this end, is opening better every foot we sink, and is now worth 180 per fathom; this will open out a fine piece of tin ground. The 30 east, on this lode, is producing moderate stamping work for 18 inches wide, worth 40 per fathom; this end is fast advancing towards the shoot of tin driven through in the level above. Porth-one lode in the 30 is not so large as it has been, but to-day it appears to be opening again and letting out more water; this I hope will soon drain the 20, and enable us to resume sinking the winze, which is suspended in consequence of too much water. The 20, on this lode, is looking very promising, and producing stones of ore. Here we are daily expecting to intersect Trava's lode, and unless the bearing is changed from that opened in the adit, we must soon reach it. The tribute department, and all other parts of the mine, continues much the same as for some time past.

WHEAL PROSPIDNICK.—R. Kendall, R. Sincok, June 7: Watson's Shaft: The summen have been engaged this week in cutting barrow-road and putting in penthouses. The lode in the 33 west is 1 ft. wide, worth about 50 per fm.; the lode in the same level, east of Watson's, is 2 feet wide; lode not taken down this week; the ground is not so hard for driving, and more promising for tin. The lode in the winze is 2 ft. wide; we have a small cross-course in the winze, to the east of which we find the lode more productive than in the shaft. Our tribute department is looking just the same.

WHEAL SICILY.—T. Hodge, June 11: In the 17 west we have intersected a north and south lode or cross-course, which as far as seen is about 4 feet wide, composed of spar, prisms, fluor-spar, iron, and kilas. We are pushing on this end by eight men, and we expect to intersect the caunter lode in about three weeks from this time. In the adit, south of new shaft, the lode is 2 feet wide, composed of soft spar, prisms, gossan, mende, and occasional spots of lead. In the last 3 fms. of driving we have been frequently meeting with patches of blue ground, in which the lode improves, and produces good spots of lead; the lode is also letting out more water, which I consider a good indication. **WHEAL TRELAUWY.**—F. Pryor, R. Pryor, T. Grefall: The 183 fm. level cross-cut is driven from Smith's shaft about 5 fms., and the ground is a little more favourable for driving. In the 172, south of Smith's shaft, the lode is worth 50 per fm. The 162, north of Chippendale's shaft, is worth 40 per fm. We have suspended the driving of the 152 from Smith's, as we have three pitches working; and also a rise which will answer the purpose of driving this end. Since our last setting we have communicated the 162, south of Smith's, with the 142, north of Trelawy's, which has enabled us to work with greater convenience than hitherto. We are still driving by the side of the lode at the 150, north of Trelawy's shaft, and are at the time cutting through the lode where thought proper. We have a slide, which we calculate on reaching from the present end in about 4 fms.; when intersected we may reasonably expect to meet with some profitable ground for driving over for a considerable length in the level above.

WHEAL UNION.—T. Glanville, June 11: In the 18, east of the eastern shaft, the lode is 8 feet wide, composed of gossan, intermixed with black copper ore. In the 40, west of Moyle's shaft, the lode is 1 ft. wide, producing saving work for tin.

WHEAL UNITY CONSOLS.—W. H. Reynolds, June 10: We are making good progress in sinking below the 85, and are happy to state that we appear to be getting down on something good. In the report for the meeting we called attention to the altered character, size, and underlie of the lode in the bottom level, and in sinking we find the lode is 2 ft. wide, still containing underlying north, and composed of a beautiful spar, prisms, peat, blende, and copper; of copper it will yield 2 tons per fm. and of blende 2 tons per fm.; the blende not being solid the cost of dressing renders it of little or no commercial value, but when found under such circumstances as we now have it, we consider it one of the best indications we can get of being on the top of a good deposit of ore, in fact the lode is improving, and we expect a rich course of copper. The 85 east will yield fully 1 ton of ore per fathom. We have found, in costaining, the Rosewater Consols caunter lode of a very promising character, and we intend opening on it near its junction with the engine lode. We expect in a few days to intersect the famous Clowance caunter lode in the 50 south.

WHEAL UNY.—S. Coode, M. Rogers: The 105, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 80, west of engine-shaft, is driving at 40 per fm.; lode worth 50 per fm. for tin. The 60, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 50, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 40, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 30, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 20, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 10, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin. The 0, west of engine-shaft, is driving at 30 per fm.; lode worth 50 per fm. for tin.

YARNER.—R. Barkell, June 11: The water is in fork at the 40, and we are hauling from that level; the lode in the 40 east is 10 feet wide, worth 200 per fathom; price for driving 70 per fathom. The slope west of Peter's winze is worth 100 per fathom; price for stopping 30. The slope east of Peter's winze is also worth 100 per fathom; price for stopping the same as the other. The rain is rather against our surface work. We are doing our best to get the engine to work, and also to get all the ore we can for the next sampling.

MINING IN THE LISKEARD DISTRICT.

TO THE EDITOR OF THE MINING JOURNAL.
SIR—As your columns are well known to be always open to mining news, and the Liskeard district is very prominent at present, a little information may be acceptable, and I will, therefore, thank you to insert my notes in the Journal. A SUBSCRIBER.
Webb's Hotel, June 7.

COPPER MINES.—SOUTH CARADON may well be placed at the top of the list. It has been working now for 25 years, and has paid to the fortunate adventurers nearly 900,000l. in dividends. It is one of the soundest investments in the county, and is paying at the present price (340l. to 350l.) about 9 1/2 per cent. The reserves of the mine are large, but should the standard price of copper fall to 100 per ton, the mine would be unprofitable. Great expectations are, however, excited about the East Caradon caunter lode, in the eastern part of the mine. This lode has been cut in the 120 fm. level, but at the 110 it will be in more settled ground. This will take some 12 months more, but it will make quite a new mine of the concern. There can be no question but that this is the first copper mine in the county, and as an investment for the next 20 years is very much to be preferred to the Fumda. WEST CARADON has seen better days, and has paid about 100,000l. in dividends, and some four years since paid enormous profits on a rich bunch of ore in the Menadue lode. At present, however, the mine is poor, but some very important discoveries are on the eve of coming off. MAXX VALLER is seriously affected by the present low standard, the quality of the ore being very low. It is believed dividends will decline. EAST CARADON is decidedly the prize of the district, and is almost unparalleled in the county for the exceedingly rich bunch of ore, more than 140 fms. in length. Should the lode cut good in the 70, of which there is no reasonable doubt, the shares must reach a higher figure, as the mine can sample 600 tons a month for the next three years without discovering another particle of ore. CHADDOCK MOOR is a good mine, but the ground is very hard, and the dividends must be small. GOMAXENA is a fair speculation, if the lode is proved northward. WEST ROSE DOWN is a fine set, but it will take many years to accomplish profitable results, so that heavy calls will have to be made. The FROSEX MINES are beginning to resume their former prosperous state.

LEAD MINES.—HENDONFOOT continues to pay four-monthly dividends of 35s. per share. The mine is looking very well, and is a good investment at 30l. to 35l. WHEAL TRELAUWY is a fine old mine, but has seen its best days. Dividends in future must be few and far between. MARY ANN MINE is also well worn out and exhausted, paying for the present small dividends, yet a discovery southward would open up a new mine, and send the shares to their old price. In WHEAL LUDDOCK the most extraordinary enquiry has taken place during this year, from 20l. to 120l. 10s. People will naturally enquire, how is this? Our reply is, that a silver discovery was made about 12 months ago, but there is nothing in the state of the mine to justify such a fabulous price as 60,000l.; and people should well deliberate before they lay out their money at the present prices, otherwise they are sure to burn their fingers. Whatever may be said about Wrey, the ground is very hard, and will never pay for driving; and as the profits in Ludcott are entirely depending on the silver, when that falls calls must be made at once. It has been a source of great loss to many local shareholders, who sold out early in the year at 2 1/2l. and 3l., and who had been large holders for years. Silver is a very uncertain thing, and has never been known to have been of long duration, being generally found in aqua and bushes, which any day may cut out, and leave the unlucky party left in the lurch. Parties should buy into this mine from the appearance of the lode found, and if so they can never expect dividends. At NORTH TRELAUWY a tale; rable lode has been cut in the 70, but very little is thought of it in this neighbourhood.

In conclusion, as an occasional visitor, I have to state I believe this district is the best in the county. There are numerous and extensive sets, both for copper and lead, that ought to be taken up and worked, and the mystery is that the people on the spot do not start them, with such fine examples of success. One remarkable feature in the place is that the prices have more than doubled the blanks. As I am in the habit of touring through the county, and speculating rapidly, though not always successfully, I most heartily wish success to the Liskeard district. May it long flourish, to the benefit of the town and the pockets of the adventurers.

THE VICTORIAN GOLD FELD, AUSTRALIA—LIFE AT THE DIGGINGS.—We have had a private inspection of an ingeniously executed model of this gold field, which is now exhibiting at the Lower Rooms, No. 8, Adelaide-street, Strand, from 11 A.M. to 10 P.M., and which required five years in its elaboration, at a cost of 3000l. It is a very interesting exhibition for our readers. We may state that the model is a representation in miniature of every phase of gold digging life, from the surface with its pick and pan, to the deep sinker with his costly array of steam-engines, pumps, deep shaft, and multitudinous tunnelling, with all the intermediate kinds of working known to the Victorian miner of the present day. The figures are formed of wax, while the tents, and whips, and picks, and shovels, and steam-engines, and cradles, and long tows, and buckets, and all the other things represented, are really and truly tiny copies of the things in daily use or view, and made of the same materials. The gold, and quartz, and reef, and sand, and real gold and quartz and reef and sand; the trees, stumps, and timber, are real trees, stumps, and timber; and all the tools and implements mentioned are manufactured of veritable wood and iron and tin. The whole affair is extremely accurate, even to the minutest detail, and to the roughness of appearance which a gold field, and, per se, a new rush, presents. The exhibited work of men practically acquainted with mining, and has been made, exhibited, criticised, and commended in Ballarat, the queen of the gold fields, tolerably conclusive evidence that the production, so far as accuracy goes, is all that it pretends to be a picture of the Victorian gold field. We now turn to a model of the shaft of the Great Eastern Company, Golden Point, showing the shaft, its mode of timbering, the strata and rock through which it was sunk, and the drives in the reef and gutter. This is a very ingenious and truthful picture of the works of one of our deep lead companies, and will amply repay in itself alone the visit of the tourist or the stranger. The shaft and drives are on a scale of half a ton to a foot, but the strata and rock are on a quarter inch scale, the depth of the shaft, 225 feet to the reef, and 823 feet further to the gutter, being too great to admit of convenient representation on the larger scale.

THE VANCOUVER COAL MINING COMPANY (LIMITED).
To be incorporated under the Joint Stock Companies Act, 1855 and 1857, whereby the liabilities of the shareholders are limited to the amount of their shares.
Capital, £100,000, in 10,000 shares of £10 each.
Deposit, £1 per share, on application, and £1 10s. on allotment.
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BROKER—C. W. Price, Esq., 54, Threadneedle-street.
OFFICES—16, GRESHAM HOUSE, OLD BROAD STREET.

PROSPECTUS.

This company has been formed for the purpose of purchasing from the Hudson's Bay Company the settlement of Nanaimo, on the east of Vancouver's Island, and of thoroughly developing the important coal fields there from which the now well-known Vancouver coal is produced.

The purchase includes 6193 acres of valuable land in fee simple, with all the underlying coal and 109 dwelling-houses, two churches, schools, stores, workshops, machinery, steam-engines, wharves, salt works, saw mills, &c.

This property, of which the islands of Newcastle and Douglas form part, surrounds the deep land-locked harbour of Nanaimo, in which jetties have been erected for the loading of vessels at all periods of the tide.

From the dip of the coal seams, and their proximity to the shore, the coal is raised and shipped with great facility.

The mines have been worked successfully for many years, thoroughly establishing the character of the coal, while proving the enormous extent of the deposit. They are, however, susceptible, under energetic and liberal management, of a greatly increased rate of production.

The surrender of their territorial rights over the island has induced the Hudson's Bay Company to sell these coal fields, with all the machinery, plant, buildings, wharves, &c., as they feel it expedient no longer to carry on in a locality apart from their future sphere of action an undertaking so foreign to their general objects and purposes.

Under these circumstances a provisional contract has been entered into for the purchase of the property, including all buildings, machinery, &c., upon very advantageous terms.

The rapid rise of British Columbia in wealth and population has already had a most important effect on the general prosperity of Vancouver, and the extremely advantageous position of Nanaimo offers such attraction to settlement that the land, with the timber, fisheries, salt works, &c., irrespective of the coal, must be long acquire a value equal to the whole of the purchase money.

Considering, however, that no other coal is worked in these colonies, and that the demand must increase with the increase of population and steam traffic, and looking to analogous cases in Australia and elsewhere, the directors feel that while in securing these coal fields, now successfully worked at an ascertained cost and profit, they are clearly not expending capital in untried or merely speculative adventure; they are acquiring a property the value of which may be developed to an extent far exceeding all present estimate.

Copies of the prospectus, with the names of the directors, and other information, may be obtained at the office, or of the bankers or brokers of the company, to whom such application must be made before the 15th day of June, when the list will be finally closed, as the greater portion of the capital has been already privately subscribed.

If no allotment be made, the deposit will be returned without deduction.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Vancouver Coal Mining Company (Limited).

GENTLEMEN.—Having paid to your credit with your bankers the sum of £ , I request that you will allot to me shares of £10 each in the above-mentioned company, and I hereby agree to accept the same, or any less number that may be allotted to me, subject to the regulations of the company, and to sign the memorandum and Articles of Association when required.

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Notices to Correspondents.

* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

STAMPS ON TACK-NOTES.—J. W. (Bangor).—Provided the tack-note be of the ordinary character, containing only an agreement to grant a lease upon the person to whom the liberty to test the value of the minerals applying for it within a certain time, it should have a 2s. 6d. stamp upon it.

CORNISH MINES, AND LONDON OFFICES.—Allow me to add another to your numerous correspondents on this question. I lately wrote several letters to the purser of a mine in which I have a few shares, for information of how it was going on, but he has never condescended to notice my letters, and I hear similar complaints by others. I should like to hear the grounds on which the pursers and agents justify this conduct, and why they and the local shareholders so vehemently oppose London offices. I see that in many cases where it has been adopted there is the greatest difficulty in getting the information forwarded, and they seem determined to prevent the London office being of that use for which it is intended. I am told that in Cornwall any important change in a mine is at once known in the locality, for it cannot be expected that the working miners will be silent on such things, and that there are people who are always on the "look out" for discoveries, or the ore "cutting out," and they manage to get the earliest information, which is not very difficult. How can we compete with such odds against us? We hear sometimes that there is an "enquiry" for such and such shares, then that a good many have been purchased "for Cornwall," and in a few days we are told something of a discovery being made, after having sold our shares from exhausted patience and purses. On the other hand, we buy largely on reported improvements, many of the shares coming from the "country," as we afterwards discover, and when too late, we are told that the lode has "fallen off." I trust you will continue to lend your powerful advocacy to this important question, and that all interested in legitimate mining will exert themselves to promote it.—ANOTHER OUT-ADVENTURER: JUNE 11.

EXTRACTION OF GOLD.—THE MARMATO PROCESS.—The letter from Halifax, Nova Scotia, has been forwarded to Mr. Evan Hopkins.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JUNE 14, 1862.

Considerable consternation is exhibited by the mine adventurers of Scotland, owing to the recent steps taken for the more energetic development of the metalliferous resources of the country having caused renewed attention to be directed by the officers of the Crown to the ownership of the minerals. It appears to us, however, that there is no cause whatever for alarm; but that, on the contrary, the position of the mine adventurer on Scottish soil is at least as good as in any other part of Her Majesty's dominions. That some have undertaken to work the lead, copper, and tin mines in Scotland without being aware that the right to all minerals in that country is vested in the Crown we do not doubt, but we cannot conceive that the want of that knowledge can in any way have prejudiced them. It seems to be beyond question that all mineral rights in Scotland appertain to the QUEEN, as they used in early days in England, and now do on the Continent, appertain to the Crown. But in many of the large properties a charter has been obtained to enable the owner of the soil to work the minerals beneath it, reserving to the Crown the full tenth of the proceeds. Again, in some cases the surface owner has taken a lease of the Crown's tenth; that is to say, has agreed to pay to the Crown a certain annual rent in lieu of an uncertain amount of royalty, according to the above scale.

Such being the position of mineral rights in Scotland, it must be apparent that no proper comparison can be drawn between what is done in England and what may be done in Scotland. The Scotch law does not appear to recognise any right to metallic mineral on the part of the subject, except where obtained by charter from the Crown. In Scotland, therefore, the Crown should be regarded as the lord, and all sets for working minerals should be obtained direct from the Crown officers. Were such a course adopted the mine adventurers would, doubtless, be far better off than when subjected to the chance of some of the exactions we have now and then heard of in the North Country. In dealing with the Crown officers, the amount of royalty would, of course, be fixed to suit the particular case in point, whilst in dealing with private individuals the mine adventurer must reasonably expect a heavier royalty, since he would work under a sublease only. The system of charter above alluded to will remind those connected with tin mining in Cornwall of the principle and abuses of the "bounds" customs in that county, where a middleman steps in between the lord and the adventurer.

Nearly every case connected with limited liability companies which has been brought before our courts of law since the Joint-Stock Companies Acts now in force became law gives further evidence of the absolute necessity for the introduction of amendments to prevent the deception, so continually practised by promoters, being carried on with impunity. At present it is, unfortunately, but too true that the commercial position of the gentlemen whose names are published as directors affords no guarantee whatever that they have any confidence in the company, or that they have any money at stake in the concern, to obtain capital for which they have lent their names. It is not unusual for the directors, or, at least, the more respectable of them, to be given a formal guarantee, prepared by a solicitor, that in the event of the failure of the company to which they lend their name they shall receive no harm; but we much doubt, after the judgments which have recently been given, whether such a guarantee would be of any ultimate advantage to them. Be this, however, as it may, the disadvantage to the shareholders, who have in good faith purchased their shares, would remain the same, since the deception practised will have caused them to embark in a company possessing, probably, sufficient external respectability to enable it to contract debt, yet governed by unscrupulous individuals, who have little to lose; and this, moreover, is not the only disadvantage, the paying shareholders run the risk of having to pay the costs incurred in the legal contests very likely to arise, when the company has got into difficulties between the official manager and the guaranteed directors.

And here we may make one remark, which may not be uninteresting to those who permit their names to be published as directors of public companies, with shares which have been given them as a qualification, and with the supposition that they will be enabled to escape should difficulties arise. These gentlemen should consider whether they do come within the observation made in the House of Lords, in the case of BURNES v. PENNELL, to the effect that if directors agree to publish false and fraudulent statements, they are not only civilly liable to those whom they have deceived and injured, but may be criminally prosecuted and punished. What can be more fraudulent than the conduct of a merchant who, with a mere nominal interest in an undertaking, permits his name to be used for obtaining money from the public? In what material particular does the action of such a man differ from that of the common impostor, who seeks to obtain from the said merchant a pipe of wine, on the representation that he is a man of position? If there be any difference it is in favour of the common impostor, who would attempt the fraud with the knowledge that enquiries would, probably, be made respecting him; whilst the merchant's attempt would be made with the knowledge that his name would be taken as his bond.

At the Court of Bankruptcy, on Saturday, Mr. Commissioner GOLDBURN gave judgment in the case of a limited company called the Great Northern and Midland Coal Company, during the hearing of which some extraordinary disclosures as to the manner in which public companies are got up were made. The promoter of the company was an unsuccessful coal merchant, who had been thrice bankrupt, the first time superseding his bankruptcy by paying 9d. in 11s., and in the second having his certificate suspended for contracting debts by fraud. From this it might fairly be concluded that his "business" was anything but profitable, yet he succeeded in selling it to the Great Northern and Midland Coal Company for 8000l., of which 3000l. was to be paid in hard cash, and the remainder in paid-up shares. It appears that the whole of this amount was for goodwill, since the principal effects seem to have consisted of two desks, a water-butt, and a chaff-cutting machine. The gentlemen, however, who agreed to give 8000l. for this valuable business were unable to pay more than 500l. BUTCHER continued in possession, and was paid 6l. a week as manager. The directors who subscribed the Memorandum of Association took only 21 shares each; and although the qualification for a seat at the board was 100 shares, the Commissioner did not feel justified in making them contributories for the remaining 79 shares. BUTCHER, however, had made each of the directors a present of 100 shares, and in respect of these they were placed on the list. It is such proceedings as these that bring joint-stock enterprise into disrepute, and we must admit that, with the law in its present state, it is extremely difficult to guard against them: we trust,

therefore, that some effort will be made to secure such protective amendments as shall give confidence to capitalists, and as have frequently been pointed out as requisite in our columns.

NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS.

A meeting of the members of this Institution took place on Thursday, June 3, at the rooms of the Institute, Neville Hall, when the annual discussion on the paper of Mr. Dunn, "On the Red Sandstone of Cumberland;" on that of Mr. Gibsons, "On certain Formations in the Tract of Country;" on that of Mr. Boyd, "On the Carboniferous Limestone of a portion of Northumberland;" and on that of the President (Mr. Nicholas Wood) "On the Relation of certain Coal Formations," was resumed. Mr. Gibsons being absent, the discussion referred principally to the subjects of the other papers, which afforded a sufficiently varied field for observation and remark. Amongst other topics, some very remarkable facts were stated as to the various effects upon seams of coal, caused by the intersections of "whin-dykes." Amongst these it was stated by the President that in cases of such intersection, where the coal was underlying sandstone, it had suffered much more injury than when underlying limestone. To account for this difference more than one hypothetical explanation might be offered, of more or less plausibility, but the singularity of the fact remained to be absolutely accounted for. In the course of the discussion Mr. Boyd affirmed another fact, equally anomalous in appearance and difficult of explanation; this was the effect upon limestone of the intersection of a whin-dyke. Limestone, Mr. Boyd stated, when overlying the whin-sill, he found in many cases to be quite unchanged in any way; whilst limestone underlying was found to be much altered, apparently by the operation of heat. Mr. Boyd's hypothesis to account for this difference was that the intersecting whin-dyke, whilst in the lava state, was forced through the limestone formation from below, until it overflew its surface or superficially. Hence, Mr. Boyd argued, the underlying limestone became changed on its upper surface; whilst limestone overlying, being deprived subsequently to this operation of nature, remained unchanged, not having been subjected to the same heat. In the course of this very interesting but somewhat intricate discussion, strong doubts also seemed to arise as to the conformity of the red sandstone adverted to, as found in different portions of the wide district under consideration. The red sandstone of Cumberland has generally been taken by geologists to belong to the red rock formation, betwixt which and those different groups classed, successively as the "Old Red Sandstone," the coal measures are found. Some have, however, adduced in the course of the investigation, which were calculated to throw considerable doubts upon the supposed conformity between some of the red sandstone found in the north of Northumberland and Berwickshire, with that which is generally classed as the new red formation of the more western district of Cumberland; and reasons were adduced for concluding that some portion of these red sandstones might belong rather to the Devonian or upper portion of the old red formation, and consequently, be anterior to the great and well-defined formation known as the coal measures of this and other districts.

A brief discussion on the paper of Mr. S. C. Crone, "On Steam-Ball Explosions," was next brought on, but adjourned.

The PRESIDENT, lastly, favoured the meeting with a detail of the various specimens of coal from different parts of the world, and also of the drawings and models of machinery used in coal mining in various countries exhibited at the International Exhibition, which concluded the business of the day.

Before the meeting separated, Mr. JOHN MARLEY gave the following notice of an intended motion to be brought before the anniversary meeting in August next:—That Rule IX., by which four vice-presidents are elected annually, shall be altered so as that nine vice-presidents be elected; that the three lowest in number of election-votes shall retire every year, and not be eligible for re-election at the meeting at which they retire; also, that in no case shall the office of vice-president be held more than three years consecutively by any member; and, further, that in future, the general meeting prior to the anniversary meeting, members for the various offices of the Institution shall be nominated, and that the officers elected from such nominated list at the annual meeting, in the same manner as already prescribed in this rule; and that the secretary send a list of persons nominated for election to the members a month previous to the annual meeting, instead of a list of all members, as now required. Notices were also given by Mr. DUNN and Mr. DAGLISH, one to move that members be empowered to introduce a friend at the general meeting of the society; the other to move that, in every alternate month in which general meetings are held the day of meeting shall be Saturday instead of Thursday, and the hour two o'clock.

PRACTICAL COLLIERY OPERATIONS.

COAL-HEWING MACHINERY.

In the working of some mines, particularly coal mines, it is required to make longitudinal horizontal grooves, and also vertical or upright grooves communicating with each other so as to divide the upright face of the work into sections, bounded on the two sides and at the lower or upper, or at lower and upper, parts with grooves of such depth or extent as is desired for determining the sizes of the sections which shall be removed by picking or otherwise from the upright surface which is being worked, and horizontal and upright grooves have heretofore for the most part been made by hand labour, using picks with handles, though it has been proposed to mount similar picks on carriages moved on rails or tramways, and to mount motion to such picks by the reaction of springs, wound up by manual or other power, and reciprocating cutters or picks, the stems of which are horizontally in guides mounted transversely on carriages, arranged on rails or tramways, have also before been proposed to be used, the cutting stems of the picks or cutting tools being actuated by manual labour, and it has also been proposed to use compressed air-engines, in giving motion to drills, for drilling holes into the coal, or stone, or mineral at various depths, in order to facilitate the working of mines, and in other cases in giving motion to rotating tools, suitably constructed to break and pulverise the upright face of the end of a drift or tunnel.

Some fifteen months since, it will be recollected an improvement was proposed by Mr. Ridley, of Low Wortley, and Mr. Rothery, the inventor of West Ardsley, according to which cutters were fixed to rocking arms, the necessary blows were given by springs. It seems that this invention, as first introduced required some modification, for we now find Mr. Ridley in connection with other gentlemen, patenting another machine. This invention, patented by Messrs. Donisthorpe, Firth, and Ridley, of London, consists in combining compressed air-engines with picks and cutting tools, such as hereafter explained, which are mounted on carriages, moved and guided by rail or tramways, such picks or cutting tools being directed to cut longitudinal, horizontal, and also upright grooves to the desired depth or extent into the upright face of the work, and thus to divide the work into rectangular sections, each section being bounded by grooves on two or four sides. For these purposes a carriage mounted on wheels, and for being moved on a rail or tramway (which is laid down parallel to the upright surface of the work), is employed, in connection by a suitable compressed air-engine, which is constantly in connection by a suitable machinery at a distance, arranged in a suitable manner to keep a constant supply of compressed air to the compressed air-engine (as in the carriage before mentioned), and a flexible length of pipe in order to allow of the compressed air-engine and the fixed air-pipe, in order to allow of the carriage moving a distance along the work. On the carriage are arranged any desired number of picks on lever handles, moving on axes, the handles being by preference cranked levers, so that at one end the pick is applied, and at the other end the lever is acted on directly, or is actuated by a connecting-rod or rods to the piston-rod or rods of the compressed air-engine; hence, as the carriage is moved at intervals along the face of the work, horizontal longitudinal grooves are made in the upright face of the work, by repeated blows of one or more picks moving on axes, reciprocating picks or axes, and in order to make the necessary upright grooves one or more picks is or are applied to the carriage, and it or they receive motion in a similar manner from the compressed air-engine.

When the apparatus is required to produce vertical grooves the picks are carried on horizontal axes, and the inventors prefer for cutting vertical grooves to employ two cylinders and two picks, the two picks are not just to wards and the other downwards; one pick serves to remove the coal, and the other would otherwise leave; the two picks are not just to wards at the same time, as they would interfere the one with the other. In the use of using picks on lever handles turning on axes, reciprocating picks or cutting tools may be applied to the carriage, and they or their stems may be slid and guided to and fro in suitable bearings, and be connected directly or by suitable connecting-rods to the piston-rod or rods of a compressed

JUNE 14, 1862.]

applied to the carriage, provision being made for raising and lowering the bearings of those cutting tools which produce the upright grooves. By these means the work may be divided into sections by grooves, and the carriage, and cutters combined and arranged as herein described, with great advantage. The air to work the apparatus is compressed at the mouth of the pit by means of an air-pump worked by a steam engine, and lead the air into the pit, by means of a flexible pipe, and lead the air into the pit, by means of a flexible pipe, and lead the air into the pit, by means of a flexible pipe.

NORTHUMBERLAND VERSUS WELSH STEAM COAL.

Following important memorial to the Lords of the Admiralty is circulated in the counties of Northumberland and Durham:

Your memorialists are largely embarked in the coal trade of the counties of Northumberland and Durham, and the majority of them in that department of the trade known as the "Steam Coal Trade"; that is to say, in raising coal used for steam navigation. The memorialists are, therefore, in a position to be able to state, with some degree of accuracy, the comparative value of the steam coals of Northumberland and Durham, as compared with the steam coals of South Wales, which are so much in vogue. The memorialists are, therefore, in a position to be able to state, with some degree of accuracy, the comparative value of the steam coals of Northumberland and Durham, as compared with the steam coals of South Wales, which are so much in vogue. The memorialists are, therefore, in a position to be able to state, with some degree of accuracy, the comparative value of the steam coals of Northumberland and Durham, as compared with the steam coals of South Wales, which are so much in vogue.

experiments upon which the memorialists rely are appended, but given in a tabulated form, which it is impossible to summarise, have not space for the tables themselves. The practical result is, briefly shown in the report of experiments on board the steamship, as follows:

Yale, Welsh coal, Consumption per hour	1236 lbs.
Yale, Welsh coal, Pressure of steam	6 lbs.
Yale, Welsh coal, No. of revolutions per minute	22
Yale, Welsh coal, Time of smoke issuing from funnel	2 1/2 mins.
Yale, Welsh coal, Consumption per hour	1112 lbs.
Yale, Welsh coal, Pressure of steam	6 1/2 lbs.
Yale, Welsh coal, No. of revolutions per minute	25
Yale, Welsh coal, Time of smoke issuing from funnel	7 1/2 mins.
Yale, Welsh coal, Consumption per hour	1116 lbs.
Yale, Welsh coal, Pressure of steam	7 lbs.
Yale, Welsh coal, No. of revolutions per minute	23
Yale, Welsh coal, Time of smoke issuing from funnel	4 mins.

is a true statement of the trial of the coals.
J. WALKER, Engineer,
R. HARVEY, Master.

DISTILLATION OF COAL—UTILISATION OF WASTE PRODUCTS.

Upon Playfair delivered a lecture at the Royal Institution "On the Distillation of Coal, especially in relation to the Production of Gas and the Utilisation of the Waste Products." Dr. Playfair, in the first instance, gave a sketch of the history of gas-lighting, noticing the experiments, at the last century, by Dr. Clayton, who confined what was called "coal gas" in bladders, which was ignited as it issued through small holes, to the production of light; and then proceeded to describe the efforts of Murdoch, and others, to apply the gas produced from coal to the purposes of illumination. Dr. Playfair then proceeded to describe the process of distillation, showing the decomposition of the gas passes through, commencing with its distillation in the retorts, and then in the "hydraulic main," and in the condensers, the acetylene gas, which is drawn from the retorts, its passage through the retorts, and its regulation of its distribution through the mains by a governor. Dr. Playfair then proceeded to describe the process of distillation, showing the decomposition of the gas passes through, commencing with its distillation in the retorts, and then in the "hydraulic main," and in the condensers, the acetylene gas, which is drawn from the retorts, its passage through the retorts, and its regulation of its distribution through the mains by a governor.

SMELTING FURNACE.—An experienced furnace master in France,

has proposed certain modifications in the construction of smelting furnaces, which are highly lauded by the editor of the *Cosmos*, and worthy of the consideration of our ironmasters. "In the present state of the art," says the editor, "the dimensions of the furnaces are too great, and whose height frequently exceeds 45 ft. It is almost impossible properly to control the charges. The furnace is so small that the fuel is burnt unequally; if the charge is too great the furnace is too small, and the work is too slow; if the charge is too small, the furnace is too large, and the work is too fast. The furnace is so small that the fuel is burnt unequally; if the charge is too great the furnace is too small, and the work is too slow; if the charge is too small, the furnace is too large, and the work is too fast. The furnace is so small that the fuel is burnt unequally; if the charge is too great the furnace is too small, and the work is too slow; if the charge is too small, the furnace is too large, and the work is too fast.

the furnace, and is pierced with two holes, one below for the running of the metal, the other above for the slag, which runs off of its own accord into a car, and is wheeled out when the car is full. The *estillages* are vaulted of fire-brick; the throat is entirely closed except the openings left for the gas-pipes, which are led to the boilers, or to the perpetual limekilns. A movable cover, balanced by counter-weights, is placed on top of the charge to retain the heat in the furnace, and drive the gas into the tubes. M. Bonne is certain that these modifications will result in—first, an economy of more than 30 per cent. of the fuel consumed; secondly, an economy of 20 per cent. in the wages; and thirdly, an economy of 50 per cent. in the expense of building, heating, and re-heating."

FOREIGN MINING AND METALLURGY.

It is stated that the last contract for rails, concluded with the Northern of France Railway Company, was taken at a very low rate—at a trifle below 6l. per ton. These terms must leave little profit to the contractors, but, in one respect, the circumstance is important, as it shows that the Belgian rolling works can produce on an economical terms as the English. In France pig readily maintains its price, but iron, on the other hand, are neglected. A gloomy report is made from Charleroi with respect to the position of the coal trade of that district, and no hopes of amelioration are at present entertained. The stocks on hand continue to increase, and at Paris and other leading French markets the depots are full.

In the Paris copper market affairs present little interest; prices are very feeble in consequence of the fall at London. At Havre the rates current are almost nominal, and no transaction of importance is reported. The Hamburg market has witnessed some moderate transactions at about previous rates. The Berlin trade is heavy, prices being feebly sustained, although they have remained without change. The French tin trade has been very quiet, but the Cologne and Berlin markets have been firm. At Hamburg, Banca has been in little demand, but English has become firmer in price. Some rather important transactions have taken place in lead at Havre and Marseilles, principally on foreign account. At Hamburg, also, lead has been in more favour, and has been sought after on Indian and North American account; some sales have been effected at sensibly better prices. The Cologne market has been firm, but at Berlin, although prices have remained without change, there has been little doing. The trade for zinc is dull at Paris, the requirements of consumption being fully supplied for the present. Prices have also been depressed at Havre and Marseilles, but at Berlin and Cologne holders have shown themselves less disposed to sell, and maintain prices with more firmness. The Breslau market has been calm, but prices have, on the whole, a firmer tendency.

A letter from the administration of the Don Coal Mining Company states that a new bed 20 in. in thickness, of which 12 in. are pure coal, has been re-struck in the south gallery of the Wiers pit, in Belgium, about 150 ft. from the Bouchard vein. The gallery is being continued in the hope that new beds will be brought to light. The same company—pursuing the sounding which it also undertook at La Malmaison, the commune of Lens, in which a bed 3 ft. 5 in. in thickness was recently struck—has just come upon a new bed of rich coal at a depth of 700 ft. The bed is nearly 5 ft. 1 in. in thickness. These discoveries are likely to give an impetus to coal mining enterprise in the district.

Space did not permit us last week to exhaust all the details rendered available by the report of the Vieille Montagne, more particularly with respect to the operations of the company in Sweden. The preparatory works of the great mining establishment in course of creation in that country were carried on last year with great activity, and as rapidly as could be permitted by local and climatic circumstances. The experience of the last five years, however, has shown that in Sweden it is always necessary to employ in all works of construction double the time which would be required for the same operations in other parts of the Continent. Thus, notwithstanding the wishes of the company, and the resources at its disposal, its central line of railway, and workshop for subjecting minerals to a course of mechanical preparation were not completed last year, as had been hoped and expected. The works of the Motala Metallurgical Company, which should have furnished rails and washing apparatus, not having been able to execute the orders received within due time, that is before winter, the Vieille Montagne administration found themselves retarded for a year by circumstances altogether beyond their control. The Motala establishment being the only one in Sweden the organisation of which responded to the requirements of the company. The mines, on the contrary, although far from having reached the point which they must attain, are yet sufficiently advanced to enter on a regular production. The two principal pits, sunk amid copious supplies of minerals, have reached, after two years' working, a depth of nearly 170 ft., the level fixed for the first stage of working. The zone of zinc minerals is now known to extend over some 3000 to 3200 yards, and it has been opened at 21 different points of this long distance, and traversed at the bottom of the previously-mentioned pits in all its power. A principal gallery for movement and draining purposes was commenced last year, in a small valley, which is found very favourably for the purpose at the level of the 170 ft. stage. This gallery will be carried out in various points at once, as the pits sunk into the metalliferous zone permit it to attain its level; and by it all the waters of the mines will find their outlet, so that it will be possible to dispense with all drainage by machinery for a long series of years. The mines are, then, ready to commence their production as soon as the central line of railway, the indispensable artery which must carry all the rough minerals to washing works at Amberg, and to the port of embarkation, has been entirely completed. Of a distance of 6 1/2 miles, 3 1/2 miles only were finished before last winter, that is before the closing of the navigation on the lakes by ice. In the course of the current month the navigation will re-open, the arrivals of rails will be resumed, and the laying of way completed without interruption. From the same causes as those just detailed, the company's washing works at Amberg could not be completed last year, as it was hoped they would have been. The hydraulic motors and part of the washing machinery to be employed were finished in June, 1861, but they have since been kept in motion only for the purpose of instructing the workmen who have to tend them. As regards the remainder of the apparatus, which will form the most important feature of the works in respect to the completion of the preparation of minerals, the Motala Company have promised to deliver the machinery in the course of the present summer. If these promises are realised the administration have reason to hope that the works will be in regular operation before the winter, and that the production will then experience a regular development without interruption, it being intended to establish heating apparatus, so as to enable work to be carried on during winter, notwithstanding the rigorous cold of the climate of the North. At the same time that the administration have pursued uninterruptedly for five years the principal works already to some extent enumerated with respect to mines of zinc and copper, railways, and the mechanical preparation establishment at Amberg, they have also had to create necessary establishments, houses for employees, and ports for embarkation and arrivals; and they have now decided to enter upon the construction of a roasting establishment for Swedish blends (sulphurets of zinc). This establishment was proposed, in the first instance, to be constructed in Belgium, in the immediate neighbourhood of the company's reduction works in that country; but the opposition which every fresh establishment in connection with the operations of the undertaking now meets with in Belgium has determined the administration to roasting their minerals on the spot. Notwithstanding the dearth of combustible in Sweden, the calculations made as to the economy with which roasted minerals, instead of raw minerals, can be transported, leads to the conclusion that the roasting works can be as advantageously placed in Sweden as in Belgium. In conclusion, the administration observe that they do not doubt that the results which the company will obtain from these Swedish mines will prove an ample recompense for all the sacrifices made respecting them.

THE CANNEL COAL OF FLINTSHIRE.

We have had occasion of late to refer somewhat prominently to the Cannel Coal of Flintshire, for which there is a continuously increasing demand. We were not then aware, however, that for some time past there has been in course of profitable development an unusually extensive coal-producing property, situated about 29 miles from the large export markets of Birkbehead and Liverpool, on the Mold branch railway. The property, which is in private hands, its owners being gentlemen connected with some of the leading commercial firms in Liverpool, consists of a freehold estate, of 114 acres, as well as the lease of the coal and ironstone existing under adjacent estates, which comprise an additional area of something like 300 acres, held upon favourable terms for 21 and 25 years. The favourable geological character of the district, and the quantity and quality of coal which this property is capable of producing are vouched for by Professor Beckett, whose scientific acquirements are acknowledged by his being the Professor of Applied Geology at Queen's College. From him we learn that the property contains a valuable bed of Cannel coal, as well as a bed below it, which is a 4-foot seam of ordinary coal. The Professor calculates that these several estates will yield of Cannel coal 923,238 tons, of which 375,380 tons will be produced from the freehold property, which is known as the Broncoed estate. Of the 4-foot bed, the several estates will yield 1,345,520 tons, of which 546,920 tons will be from the freehold property. It is estimated that these combined collieries contain the enormous amount of 4,400,240 tons of coal, of which must be allotted to Broncoed 1,387,857 tons, and, therefore, exempt from any manorial charges. The Professor computes that within 21 years 2,000,000 tons will be raised, of which 375,380 tons, obtained from the freehold estate; will give an average profit of 9s. 4d. per ton, amounting to 175,177l.; and the 547,858 tons of Cannel coal obtained from the leasehold lands will give a profit of 8s. 2 1/2d. per ton, or 224,850l.; of common coal, the 300,000 tons raised from Broncoed will give a profit of 2s. per ton, or 30,000l.; and the 776,762 tons raised from the leasehold land will yield a profit of 1s. 4d. per ton, amounting to 51,784l. The total profit during the 21 years will be 481,811l., or an annual profit of 22,943l. As an evidence of the enterprising character of the possessors of this gigantic undertaking, it may be stated that, irrespective of a valuable and efficient plant, there have been erected upon the property, or rather the different properties, as many as ten powerful steam-engines. In addition to the coal, there exists in the freehold estate large deposits of lime and ironstone, which latter, it is thought, can be profitably disposed of to the ironmasters of the neighbourhood. As implied by its title under consideration—THE SMELTING, REDUCTION, LIME, AND COAL COMPANY—it is proposed to carry on smelting operations upon an extensive scale, for which the locality is admirably adapted, yielding as it does considerable quantities of lead and zinc ores, and possessing unusual facilities for transit both by railway and water carriage; and advantageous arrangements have been made for the reception of consignments of foreign ores. Taking all these facts into consideration, it would seem that there are few enterprises which offer such inducements to the cautious investor, for it would not be an easy task to select one of a more *bona fide*

or permanent character. We are informed that, from the yet comparatively limited extent to which these collieries are in operation, the company derive a weekly profit of upwards of 1000l., or rather more than 50000l. per annum; but, when the collieries are in full operation, Professor Beckett (as has already been stated) estimates from that one source alone there will be, for the first 21 years, an average annual profit of 22,943l. We should not have thus early recurred to this subject, had it not been felt that those interested, or about to be interested in similar projects in the vicinity, should be made aware of the eminent success attending the operations of this extensive and well-organised undertaking.

REPORT ON CORNWALL AND DEVONSHIRE.

[FROM OUR CORRESPONDENT IN TREVOR.]

JUNE 12.—For a mine not attracting the interest of the Market, no concern has received more attention from the mining community of the Redruth and Camborne district for the last few months than EAST POOL. This mine is situated to the north of Carn Brea set, on lodes parallel to those worked so productively in those great mines. It is an old working, having been commenced by the late Mr. William Reynolds, the steward of Lord De Dunstanville, whom I have more than once referred to in this Journal as the originator of so many mines on the Basset estates. In his working the mine was sunk on the north lode to the 120, where the shaft was stopped for many years. The principal workings by the present party have been on the East Pool south, or Tincroft north lode, near the boundary of Carn Brea set; but of late this lode became poor, and the sinking of the shaft on the north lode was resumed under the management of Capt. W. S. Garby. This north lode underlies south, and in sinking the shaft perpendicular it was intersected 5 fathoms below the 120. Upon the intersection of the shaft with this lode, it was proposed by some of the adventurers to continue sinking the shaft on its underlie. Fortunately, however, for the mine, at the pressing instance of Capt. Garby, the shaft was continued perpendicular, and in about 15 fathoms sinking—that is, about 5 fathoms below the 130—the lode came down suddenly into granite, making, at the same time, one of the most extraordinary bodies of mineral ever met with in the district.

Subsequent explorations have shown that where the shaft intersected the lode, a "dropper," a few inches wide, went off from the north lode, underlying north. For a distance of about 10 fms., till about 4 fms. below the 130, this continued a mere string; but, upon coming down to within 6 ft. of the granite, it opened out quite suddenly into a great lode, 12 ft. wide, and underlying a little north, made up of mundic, copper, tin, and particularly wolfram, in great quantities. It is scarcely possible, without the aid of a diagram, to convey an exact idea of how this extraordinary body of metalliferous mineral made at this junction; but full sections of it are given in this month's "Mining and Smelting Magazine." The lode, although it has been undoubtedly rich for tin and copper, particularly the former, has had its produce of these metals so deteriorated by the mixture of other minerals, especially wolfram, which is so difficult to separate from the tin, that its commercial value has been grievously depreciated. The opinion of those interested in the mine is that this wolfram, which in some places occurs in such quantity as to form a rib 4 ft. wide in the lode, may be expected to disappear in depth, leaving a large and rich lode of copper and tin; others, on the contrary, doubt altogether the permanence of the formation, and assert that it is to be considered more a "floor" than a regular lode. The next level—the 150—which is being cross-cut from the shaft, and which may be expected to intersect the lode daily, will, in a great measure, decide the matter, and, consequently, the event is looked for with great interest by all parties, for the whole of the mines in the same run, and, indeed, those to the north, are nearly equally interested in the matter with East Pool. As far as yet seen, in the stopes which are worked 3 fms. below the 140, the lode shows no indication of falling off.

It is remarkable that the increased size and productiveness of this north "dropper," which makes it into this new lode, seems inseparably connected with the granite. In the 140, in driving east about 18 fathoms from the shaft, the granite drops down out of the level, and with it the lode becomes at once again a mere string. East Pool is joined on the east by Wheal Agar, and on the west by South Crofty. In the latter mine rather extensive works are being carried on; but the western part of Wheal Agar is not working, although there is a full plant of machinery in place. The topography, I believe, originated in some water squabble between the two adventurers; but it is a piece of ground which, under present circumstances, ought not to be neglected.

The fall in the standard of copper ore is already severely felt by most of the great producing mines of West Cornwall, for their present position is far from being such as will enable them to bear it readily. In the case of those that are paying dividends we may look for a considerable reduction, and the position of struggling mines will be greatly aggravated. This would be a very serious matter, both for mining investors and speculators, as well as those who principally look on mining as a means of affording employment to large masses of people, if a continuance of this depression were looked for. There is no prospect, fortunately, of such being the case, for those who are best informed look for a speedy advance when the present great stocks of foreign ores and regulus, which are now weighing down the market, are once disposed of. Still such a fall must necessarily be expected to affect the value of mining stock injuriously, particularly as we know there is a party connected with mining who are always haunted with the *bête noire* of shoals of rich foreign copper coming in from every part of the world, and sinking the price of that metal to rates at which copper mining in Cornwall can never pay. The reasons given for these opinions are plausible enough, and would be likely to influence our opinion considerably, had we not had a large experience of the failure of similar prophecies during past years. On the discovery of gold in California and Australia it was predicted on all hands that the price of that precious metal would fall seriously, and the most sanguine scarcely hoped that the fall would be more than a very gradual one. Yet nothing of the kind has yet happened, nor does there seem any prospect of it. This would be almost unaccountable, if the experience of late years had not shown us the extraordinary absorbing powers which are created by the rapid growth of industry and wealth all over the world, and which have scattered the predictions of the "croakers" to the winds. On this we may, I believe, rely—that the copper produce of our home mines will for many a year yet to come find remunerative markets. At any rate, this industry is only in the same position as most others; for if in the progress of industry and wealth there is not a proportionately elastic absorbing power for the daily increased production of all things that are going on around us, then it is clear that all our aspirations and self-congratulations on our progress in population and productive power are delusive. Until they are proved to be so on some better ground than gloomy predictions of the class we have all heard of as long as we can remember, and which have all hitherto proved to be wrong, we may be content to have faith in the future of our metallic mining prosperity, as we have in that of all our other great branches of industry.

While referring to mines which are deeply influenced by changes in the standard, may we not congratulate ourselves upon possessing some whose position is above such considerations? I mean certain "progressive" mines, whose market value is little affected by any changes in the Ticketing Paper. Probably, of all things in the world nothing is more difficult to fix than the money value of such a property. Old established mines, which have reached a definite position, can easily have a fairly approximate value assigned to them; but the worth of young, promising, and only partially developed mines, in good districts, seems a matter which is incapable of calculation. Such mines often go to a great price—a price far beyond the value of any discoveries actually made. In such cases prudent men—men who look at mining in a cold view—say that such and such a mine is selling too dear. For any absolute discoveries they are quite right; but still it often turns out, if the mine is in a good district, that in the end the result justifies the sanguine speculator. Mines have a prospective value, but this is so much a matter of opinion that he must be a presumptuous man who attempts to dogmatise upon it. Let us take the instances of three well-known concerns—East Caradon, East Carn Brea, and New Seton. All these are selling for prices which no absolute discoveries justify; but does it follow from this that they are too dear? I do not think it necessarily does. It may seem buying chances too dear to give at the rate of nearly 50,000l. for New Seton, with nothing discovered of value, while dividend mines can be bought for less; but the result will, probably, show the wisdom of the speculator. When East Caradon was 20l. per share, prudent men said they were too dear; and so they were for the discoveries absolutely made, probably dearer than they are at present prices with present discoveries; but the result justified the speculator. In fact, such prices may be said to "discount" future discoveries; but such are the resources of really good mining districts, that experience seems

almost to show that prospects in their case are as good as ore discovered in other districts.

[The article which appeared in last week's Journal, under the heading of "Mining in Cornwall and Devon," was not furnished by our Truro correspondent.]

REPORT FROM NORTHUMBERLAND AND DURHAM.

JUNE 12.—There is little change of importance to notice this week in the Coal and Iron Trades. Some alteration in the state of affairs in America is looked forward to with great interest by the local manufacturers, and there is no doubt if matters were cleared up there would be a great improvement in the general trade of the district.

The monthly meeting of the Northern Institute of Mining Engineers was held on the 5th instant (the President in the chair). After considerable discussion on the papers of the President, Mr. Boyd, Mr. Dunn, and Mr. Gibbons, the subject was again adjourned, Mr. Gibbons not being present. Mr. Gibbons promises to give another section, which will illustrate the matter more fully. Mr. Crone's paper "On Steam-Boiler Explosions," with special reference to the Seaton Burn explosion, next came on for discussion. The President said he thought there was something in connection with these explosions which had not yet been found out. He said that, in reference to the Byer Moor explosion, he considered there was something peculiar in the pressure of that boiler. Several members considering that the subject demanded a meeting purposely to consider it, the subject was adjourned. Mr. Berkeley promising to furnish some data taken at the time of the Byer Moor explosion. Mr. Marley gave notice of a motion at the annual meeting in August of an alteration in Rule 9—that in future there be nine vice-presidents instead of four, the three least in number of votes to retire at the next annual meeting, such three to be ineligible for re-election at that meeting, and that no member hold the office more than three years consecutively. Mr. Wood then gave some account of the coal and mining machinery in the International Exhibition, remarking on the small number of specimens of coal from this district, when the meeting adjourned after a sitting of nearly three hours duration.

[In another column we give a detailed report of the proceedings at the Northern Institute of Mining Engineers, which has been forwarded to us from the Institution.]

A meeting of delegates was held at Durham, on Saturday, to consider the rules submitted for the formation of a Permanent Relief Fund—Mr. J. Howie in the chair. The Chairman read the rules, most of which seem to be very simple and to the point, and promise well for the ultimate success of the movement. The following is an abstract:—The society is to be called the Northumberland and Durham Miners' Permanent Relief Fund. Its benefits may not be exclusively confined to the two counties, but shall be open to the co-operation of miners, when organized, of other districts of Britain. It has for its object the raising of funds by subscription, to provide in cases of fatal accidents for the widows or children, or other dependent relatives of the deceased. In cases of accidents, not fatal, but where the workman is permanently disabled, to make suitable provision. When a member has been laid off work from an accident for a period of six months he shall then be entitled to relief from the funds as a permanently disabled member. The members shall consist of all persons employed in or about collieries, or other persons by becoming donors to the amount of 10l., or annual subscribers of 1l., may become honorary members, but not entitled to pecuniary benefit. That each colliery or branch have a committee, president, secretary, and treasurer. Districts to be formed by collieries (not more than 12) uniting, which may be conveniently situated to each other. The business of the society to be managed by a committee of 13, including president, secretary, and treasurer, to be chosen at the annual delegate meeting to be held on the first Saturday in May in Durham and Newcastle alternately. They shall meet quarterly for the transaction of business. That each member pay 2d., half members 1d. per fortnight, and if any member neglect to pay his contributions for six weeks he shall be fined 2d., and if behind three months he shall be excluded from all benefits of the society until he pay up all arrears, and a fine of 1s. Some discussion then took place, some of the rules being slightly altered or amended. In cases of fatal accident it was agreed that the widow, or other relative upon whom the care of the family would fall, should receive 5l. for funeral expenses, and 6s. per week afterwards, each of the children who were dependent upon the labour of the deceased to receive 2s. per week. A committee of 13 members was appointed, of whom Mr. Henry Taylor and Mr. J. J. Hunter, of Newcastle, and Mr. Bramwell, of Durham, were to be asked to form a part. Mr. Leithard was elected treasurer, and Mr. Alexander Blyth honorary secretary.

Among the festivities at this time of the year, the soiree of the Killingworth Mechanics' Institute, on Monday, is deserving of special mention. This is a colliery village, situated about eight miles north-east of Newcastle. The weather was very unpropitious, but, despite the rain, a numerous company assembled, numbering about 1200 persons. After tea a meeting was held, Mr. S. C. Crone, the resident viewer of the colliery, presiding. In the course of his address he said:—I trust our anticipations as to the result will be realised, and that our building fund will be considerably increased, as it has been determined to devote any profit that may arise from the present meeting to the fund for erecting a suitable building for a mechanics' institute, which it has been designed shall take the form of a memorial building to the genius of two of the most eminent engineers that ever lived—George and Robert Stephenson, whose career of usefulness began and was developed at this old and respected place of Killingworth. They have passed away, but their names yet live, and their works will endure for ages to come. He said it was reasonably to be hoped that mechanics' institutions will be instrumental in the spread of scientific and general knowledge amongst the class for whom they are more specially designed, and this, in a certain sense, assists in causing more care to be taken of our coal mines. The proprietors of collieries are most anxious that everything should be done to protect the lives and property of their workmen from injury; but it is no less incumbent on every individual workman to exercise the most watchful care and caution to guard against accident, and strictly to adhere to the rules and instructions for his guidance. Mr. Crone also alluded to the co-operative store movement. He thought they were not formed upon equitable principles to the community at large. With all credit to those gentlemen who have encouraged the establishment of these stores, I cannot agree with the principle altogether. Co-operative societies for manufacturing purposes, or for building societies, are good, and I think that any person may find employment for his savings or his capital in a legitimate way with benefit to himself and others, but let us not injure others to benefit ourselves when it may be avoided. The number of members in the institute is 73, a very respectable number.

Mr. R. S. Johnson, late viewer of the collieries held under the West Hartlepool Harbour and Railway Company, has been presented with four superb silver entree dishes and stands, together with a handsome silver claret jug, by a number of his friends, as a mark of their esteem and regard.

The following is the state of the blast furnaces of the district on the 1st day of June, 1862:—

	In.	Out.	Total.
Easton-Bolckow and Vaughan	9	—	9
" Clay-Lane Company	2	1	3
" Samuelson and Co.	3	—	3
Cargo Fleet—Jones, Dunning, and Co.	2	—	2
" Cochran and Co.	4	—	4
" Gilkes, Wilson, Pease, & Co.	4	1	5
Middlesborough—Bolckow and Vaughan	2	—	2
" Hopkins and Co.	2	—	2
Port Clarence—Bell Brothers	5	1	6
Norton—Warner, Lucas, and Barret	2	1	3
Ferry Hill—Morrison	2	—	2
Stockton—Holdsworth and Co.	3	—	3
Thornaby—Whitwell W. and Co.	2	1	3
Darlington—South Durham Company	2	1	3
Witton-park—Bolckow and Vaughan	3	—	3
Stanthorpe—Weardale Iron Company	3	1	4
Towlaw—Weardale Iron Company	4	1	5
Consett—Derwent Iron Company	4	14	18
Total	64	25	89
All furnaces, May 1, 1862	43	20	63
" " 1861	56	11	67
" " 1860	63	16	79
" " 1861	60	50	110

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JUNE 12.—The Iron Trade continues to manifest the degree of improvement previously mentioned, and several of the works are fairly supplied with orders for plates, sheets, angle iron, &c., whilst the demand for common bars is quiet. Some of the iron making here is understood to be for the Southern States of America. How it is to reach its destination is a question for those who undertake the venture. The Pig-Iron manufacturers are very firm, and a general advance of from 2s. 6d. to 5s. has been made in the quotations, the higher rate of advance having taken place in the hematite pigs, and in some qualities of cinder pigs; the hematites have greatly improved recently. A further advance is announced as probable by the Workington Company. The wrought-iron manufacturers are generally unwilling to acknowledge that any or much advance has taken place in pig-iron, and probably some of them who are large purchasers may have bought at little or no advance on last quarter-day's rates; but there can be no doubt that the price is higher.

The inquest in connection with the Bradley Colliery accident was concluded on Tuesday last. Plans and sections of the workings were produced, and evidence given which fully agreed with the account of the accident given in last week's Journal. The whole direction of the work was entrusted to the ground bailiff, Mr. John Harvey, sen., and he stated that the extremity of the roadway which was being driven, and into which the trruption of water took place, was 30 yards from the place in the Black Coal workings, to which he expected the accumulated water reached, and which the roadway was intended to draw off. Other witnesses, including the chartermaster, said they understood that it was 16 ft. distant. The examination of the spot subsequent to the accident showed that the water had risen to a gate-road in the thick coal immediately above the roadway, and between which and it there was only a thickness of 3 ft. 6 in., or 4 ft.—The chartermaster said he was never informed of the existence of this gate-road, and that he supposed he was under the solid coal.—The ground bailiff said he did not for a moment anticipate the water had risen so as to fill the gate-road, because from his previous knowledge of the mine he had found that the water always ran off the engine pit by some outlet when it had reached the height at which he had calculated it stood. He had been unable to ascertain the position of the water in the thick coal by actual inspection, in consequence of the accumulation of suffocating gases in those workings. He also stated that when in the roadway on the day before the accident, he gave orders to the doggy (or chartermaster's foreman), who was killed, not to carry the heading further until boring rods were used, and to go on bricking the excavation already made; but it was plain that those orders had not been obeyed—in fact,

a man named Venables fired a shot in the roof on the same evening; and this man, who was not in the working at the time of the accident, deposed that the doggy never told him the heading was to be stopped by the orders of the ground bailiff, although a workman whom he met as he was going to work said such orders had been given.—Mr. Baker, the Mines Inspector, was present during the enquiry, and examined the witnesses, and explained the plans to the jury, and he expressed his opinion that had the provisions of the Act of Parliament as to boring where the presence of water was anticipated been complied with, the accident would not have occurred.—The jury, after a protracted deliberation of two hours, returned the following verdict:—"That the death of the seven deceased persons was caused by a rush of water into the pit in which they were working, occasioned by the neglect of John Harvey, sen., but the jury do not consider the evidence sufficient to criminate him."

Mr. Keateven, a member of the highly respectable firm to whom the colliery belongs, said they deeply regretted the occurrence of the sad accident. They had hitherto always found Harvey trustworthy, and had considered him capable of performing his duties. They were very desirous of doing all they could to ensure the safety of the workmen in their employ. The jury entirely exonerated the proprietors from any blame.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

JUNE 12.—The festival of Whitsuntide has interfered with the regular routine of business, but the condition of the labouring classes in the coal and iron trades is such that their means of employment have been seriously crippled. Notwithstanding the regular supplies of iron required for railways and the immense orders which the Government has lately given out for armour plates, the condition of the iron Trade in these counties is exceedingly unsatisfactory. At Elsecar the greater part of the men will leave work when their notices expire, and as a large number of hands are employed, and the material welfare of the district depends upon the prosperity of the works, all parties in the neighbourhood will feel the effects of the suspension of the works most seriously. There is no improvement to notice in the Steel Trade, the number of orders usually given out at this period of the year being much below the average. Some large orders have recently been received from Russia for tools for machinery, and there is a better demand for files, but these of the whole, is seriously depressed. The only exception is the crucible steel trade, the manufacturers of which have been doing an immense trade, some of the houses having been working day and night to meet the extensive demands made both for home and continental requirements. The Coal Trade is exceedingly depressed, and coalmasters generally find it difficult to keep their works going half the regular time. At some of the most successful collieries, where large contracts for gas and other works have to be supplied, there is little trade doing, and the colliers are not making more than half time, and some little more than four days' work in the fortnight. The greatest complaints are made of the existence of underfeeding, and some coalmasters affirm that they are glad to rid the mineral almost at any price, if only for the sake of keeping their employees from the state bordering on starvation. The great depression prevailing in the manufacturing districts of Lancashire is exercising such a powerful influence all over the manufacturing towns in the kingdom, that it is difficult to conceive when an important change for the better may take place. It would scarcely be believed that notwithstanding the distress prevailing in the colliery districts, some colliers have been found stupid enough to strike work for an advance in wages. We allude to those colliers at Cinder Hill, near Nottingham, who are now asking for an advance in wages, about 600 of whom are walking about the streets begging for their daily bread.

There has been no alteration in the position of the Derbyshire Lead Mines for several weeks past; the extreme depression of trade having put a stop to all speculative progress and enterprise. The Mining Share Market is very flat, and there is literally nothing doing that would justify a report.

Some few weeks since I referred to a strike of the puddlers at the Milton and Elsecar Ironworks, near Barnsley, and now that the strike is terminated, it turns out that the complaint of the men, that the iron given them to work was bad, was entirely without foundation. The men stated that the company were giving them such bad iron to work that it took them fourteen hours a day to get out their six heats, with good iron they could do in nine hours, hence their leaving their work. The company had three of the ringleaders up before the magistrates, and at the hearing they employed Mr. Roberts (the attorney-general), of Manchester, to defend them, who made it appear that the manager had agreed to give them 1 cwt. of plate, or refined iron, to every 3 cwt. of pig-iron, and that he had promised this as a permanent thing, but had taken it away again, hence the cause of the strike. The magistrates appeared to take this view of the matter, and dismissed the case; consequently this, to a certain extent, was a triumph for the men, and has caused them to lose something like six weeks' work; as they had made up their minds they would not work the iron which they knocked off at, and unless it was changed, and 1 cwt. of refined iron substituted, they would not work. Of course, the company were determined that neither change should be made, and that, if the men did begin, they should work the iron they had left. On Wednesday evening the men went back and worked it, and not only got their heats out in the ordinary time, but made first-rate iron. It should be understood by the position, that what the puddlers had had iron in which the pig-iron is grey, which takes a little extra work, and makes good iron for the master; but what they consider good iron for themselves is white and mottled, which takes little work, but makes bad iron for the master.

Considerable excitement has been occasioned in the colliery districts by the practical application of a machine for "winning coals," which is calculated to work an important change in the coal trade of the country. It is called a coal-cutting machine, is worked by a compressed air-engine, and is now in practical operation on the premises of the West Ardsley Coal Company. The Balaklava pit, in which the machine is now in operation, is 170 yards deep, and has, we believe, the "working face on the plane." But the principle of the implement has been so thoroughly elaborated by its scientific improvers that it is applicable to all kinds of pits, whether of coal, ironstone, or fire-clay. The engine-house contains a powerful steam-engine, which is connected by a system of pipes to a distance of nearly a mile from the bottom of the driving shaft, the pressure being about 50 lbs. to the inch. The cutter itself is a neatly-constructed machine made to run on the tab-carriage way. It requires a man to direct it, and this "tenter" can, by working round his wheel, advance the pick or cutter over the face of the bed of coal, and thus, in the course of working, bring down the blocks of the mineral as he requires them. It is one of the principles of the "compressed air coal cutter" to improve ventilation. As the cutter is working away with considerable force at the coal, it should be understood by the position, that what the puddlers had had iron in which the pig-iron is grey, which takes a little extra work, and makes good iron for the master; but what they consider good iron for themselves is white and mottled, which takes little work, but makes bad iron for the master.

A serious accident has occurred at Messrs. Potter and Co.'s new colliery, at Knot Mill, Darwen. The miners were engaged in running home a lot for blasting the hard rock, when a spark was produced which exploded the charge. Fragments of rock were scattered in all directions, and three of the miners were very seriously injured. Andrew Thompson had both his hands nearly blown off, and was otherwise injured. John Holden was very badly bruised and scorched. Thomas Harwood was bruised about the head, but with assistance he was able to walk.

The dispute between the puddlers employed by Messrs. Dawes, ironmasters, of Elsecar, and their employers, has been settled, and the necessity which induced them to suspend the works has consequently been removed. The men, who had been out on strike for a considerable time, resumed work at the old terms on Wednesday, and the best of feeling now exists between both parties, in proof of which Messrs. Dawes have promised their men a trip to Belle Vue Gardens, Manchester, and they have favourably entertained a proposal for a treat to the Exhibition some time during the season.

REPORT FROM MONMOUTH AND SOUTH WALES.

JUNE 12.—As is usually the case on the advent of holidays, a few days are lost at nearly all the works, which, if it happened at any other time, would be considered rather an unwelcome sign. It is remarkable to note the spirited manner in which the volunteer movement has been taken up by the colliers and miners generally, and if the same progress is made during the next two years as has been done during the last two years, it may be safely asserted that Britain will possess an army of miners. Trade remains to a great extent in the same condition as at present, but not without a few exceptions. The ironworks at Ebbw Vale, Beaufort, Trodegar, Aberdare, Dowlais, &c., are proceeding as usual, every branch being steadily, although, perhaps, not actively employed. The expectation of orders for iron plates, which is generally thought, must be had from this district, has given considerable encouragement to the ironmasters, who, it must be admitted, have lately had great difficulties to contend with. The Coal Trade, also, remains in the same dull state as heretofore, which greatly retards legitimate speculation. Orders are not particularly scarce, but the prices offered are so low that vessels can hardly be obtained to accept the freights. The Admiralty are advertising for tenders for 3000 tons of South Wales steam-coal, to be delivered at St. Paul de Leando. This, notwithstanding that it is but a small contract, will infuse a new spirit amongst the coalmasters. Last week the success of Messrs. Webb and Spittle, at Aberbeeg, was noticed, after having incurred a large outlay. The coal is of good house properties, and the vein 2 ft. 7 in. thick. The spirited proprietors are making every exertion to commence working without delay. The Rieca Company's pits afford more regular employment than was the case some two or three weeks since. As stated in a previous number of the Journal, the Trodegar Coal Company are in treaty for large coal contracts to the Italian Government, and there is every prospect that they will be successful.

Speculation in collieries has lately met with considerable disfavour, and there are many reasons why such should be the case. Coal mines have been brought into the market, and companies formed by interested parties to work them, with but little hope of practical success. The result has been that the shareholders' money is squandered, and ultimately a winding-up takes place. As may be easily supposed, this has an unfortunate influence on legitimate schemes brought before the public, as it has been the means on many occasions of preventing the necessary capital being subscribed. "Perseverance surmounts difficulties," however, and it is gratifying to see that three substantial companies are now formed for working coal mines in this district. The Amman Colliery Company, which is now an established fact, has a field of unworked coal not surpassed in the Aberdare valley. Tenders for extensive alterations in the shafts and workings have been advertised in the Journal, and everything seems to be going on in the most satisfactory manner. The Llannorials Colliery Company, which is another recently-started concern, is also proceeding in a satisfactory manner. A large quantity of coal is now on the bank, and the quality proves to be a most superior house coal. The Glifach Colliery Company comes next under notice, and it must be admitted the property as reported upon by the company's engineers offers extraordinary inducements. It is not a speculation to sink some 150 or 200 yards for a particular vein, but the coal has been actually proved a few yards from the surface, and in many places it crops out. The expense of the preliminary explorations is what falls heavily upon shareholders often, but in this instance the obnoxious item can be but very small. There is no lack of railway accommodation either; and with all these favourable prospects, it is strange if the company does not succeed.

ALBERT IRON AND CEMENT WORKS (near Whitchy).—After the many struggles and difficulties this company has had to contend with, they have now got into full working order. The furnace is erected on the newest and best construction, and is turning out a large quantity of first-class iron, the quality of which has been tested, and found to be very superior. The shares, which at one time could not be sold at any price,

are now eagerly sought after by first-class investors; the holders are now asking a premium, and but few shares are in the market. The shareholders are now looking forward for good and lasting dividends.

THE COAL TRADE—EXTENSION OF COLLIERY OPERATIONS.

The very valuable collection of specimens of fossil fuel, the problem of the national Exhibition, has naturally caused attention to be directed to the various districts from which they have been obtained, and the estimates submitted will, doubtless, be that English capital will be largely embarked in Austrian colliery enterprise. The specimens exhibited represent collieries from which upwards of 2,000,000 tons of coal and lignite were raised in 1860, the total amount at present statistically registered being about 3,500,000 tons. During the year in question there was raised from collieries exhibiting in—Bohemia, 692,840 tons; Moravia and Silesia, 1,110,000 tons; Galicia, 56,000 tons; Hungary and Banat, 297,100 tons; Transylvania, Military Border, Croatia, and Esclavonia, 10,180 tons; Austria proper, 121,260 tons; Styria, 112,080 tons; Carinthia, 36,450 tons; Carniola, 7370 tons; and Dalmatia, 6500 tons.

From these figures it will be seen that Bohemia occupies the first place in the list, and whether we look at the samples of coal or lignite we must admit that there are great inducements for the capitalist. The Bohemian coal is of excellent quality, and is chiefly worked with Austrian capital, the Prince Schwarzenberg, the Imperial State Railroad Company, the Crown, the Elector of Hesse, Prince Schaumburg-Lippe, and the Prussian Iron Industry Company being the principal coalmasters. In addition, however, to the true coal the lignites, which are very abundant, are largely and profitably worked, and recently English capital has been introduced into the Elbe and the Karbitz Companies having already been formed in London and the Teplitz, which they adjoin, being now in course of formation. The property about to be worked by the Teplitz Company has been inspected, and very favourably reported upon, by Mr. John Brown, of Darnley, and the Imperial Berg Commissaire officially reports it to contain nearly 6,000,000 cubic fms. of fuel available for market. Mr. Brown reports that the coal has a good roof, and will require but a sparing use of timber. After referring to the extent of surface under which the mine is to be worked by the company lies, and to the fact that it contains 72 per cent. of carbon, and explaining that 24 or 25 trial shafts have been sunk to the coal, that the roads are good, and that the district is well, but not densely populated, he continues:—

Brown coal from the district, but of somewhat inferior quality to your property, is supplied to the markets at Aussig for shipment to the various towns situated on the margins of the Elbe River. To Leipzig, Berlin, Prague, and many other places, it is carried by the rail. Most of these towns I visited with a view to ascertain the exact state of the coal markets. In that of the Prague I found two kinds of coal, the lignite and stone coal, the latter from Rakowitz. It is very dirty, giving the brown coal an enormous advantage over it. The population of Prague being 150,000, the consumption very large; it offers, therefore, a splendid market for lignite. The same may be said of Dresden, a large and fine town of 110,000 souls. The other main towns are Magdeburg, and Berlin, with an aggregate population of 605,000. To all these places and the other large towns in their vicinity, the brown coal has been sent by rail trains and otherwise. It has excited a desire for a large supply, which is quite extraordinary; and this is speaking only of it as a household coal. The market for the manufacturing purposes is all but limitless. What is required to bring the coal of the Teplitz Colliery to the surface, is first the sinking of a proper shaft and the putting of proper pumping apparatus, the two works proceeding simultaneously, so that on the completion of the former the latter will be able to perform those duties without the coal cannot possibly be won; in this way time will be saved, and disappointments prevented. By the favourable position of the railway in progress intersecting the coal field at the lower level, you will be enabled to arrange the pit-shafts, as well as all the circumstances, to be in complete command of water (the feeder), and the elevated coal will be won at easy depths.

Great stress is laid by the promoters upon the immense value of a great central European coal field, within cheap distance of all the great manufacturing towns, within a radius of 200 miles from Dresden, supplying coal containing no sulphur, and this especially in a country so rich in iron, silver, tin, and most other useful metals as Bohemia; and this view appears to be confirmed by Mr. Brown, who states, moreover, that—

The depth to the coal at the deepest point will be about 60 fms.; the coal only required to be won. Firewood is fast disappearing from the district, the winters are unusually cold, the markets are most ample, the demand will be exceedingly large, and the price high. The cost of raising and screening 400 tons of merchantable coal (including profit or loss) will be 41l. 13s. 4d., or 2s. 1d. per ton, but allowing the large margin of 4d. per ton for advance in labour, which may possibly take place, or other contingency, there may easily be put down at 2s. 6d. per ton, whilst the lowest selling price, under circumstances, is 5s., leaving a pit margin clear 2s. 6d. I consider worth not to sink a cost of 25,000l. will be quite adequate to the delivery at the pit's mouth of 1000 tons per day of merchantable coal. I recommend that contracts for the works to be executed should be for the delivery of that quantity of coal in the first instance; at the end two or three years two additional winding-shafts, sunk through the coal at lower depths, will increase the daily drawings from 1000 to 2000 tons.

The capital of the company has been fixed at 60,000l., in shares of 10l. each, and the properties will be held direct from the Imperial Austrian Government, in perpetuity. The prospectus is published in another column, and maps and plans have been prepared for the information of those who may desire them.

Original Correspondence.

THE MINE INSPECTORS' SUGGESTIONS.

SIR.—In the Journal of May 24 appeared the suggestions of the Mine Inspectors, in answer to the circular letter of the Secretary of State, and in a leading article of the same date you highly approved of their suggestions. But I rather differ with you, and think there are some points which require grave consideration before such suggestions are enforced by law, and the workers of our coal and ironstone mines are compelled to put them into operation, providing they elect to go to the expense that will be entailed. There can be no doubt that guides or conductors of the mines are highly advisable, and they can be easily applied where the minerals are to be extracted from the same shaft and bottom for a considerable number of years, but where there is a continual changing of the bottom, higher, lower, as the case may be, from the variety of minerals to be worked, the circumstances are different, and it becomes a question whether the conductors will work effectually, especially when it is known that the great thickness of the strata of coal and ironstone that have been worked all round the shafts, the shafts have been twisted first to one side then to another, till they are quite out of the perpendicular, and are bulged and into all manner of shapes. It may be said that all these defects can be remedied, but, in the majority of instances, it would be at such an expense as to be almost tantamount to making new pits altogether—an expense which everyone knows the coal and iron trade at the present time, and for some years back, is not in so profitable a state to meet.

The enforcement of the suggestions will, in my opinion, be the means of completely shutting up a whole host of pits where small quantities of minerals exist, and are now being worked, giving employment to a considerable number of hands. The minerals in some districts are fast being worked out, and in old times it is well known, in many instances, the miners were worked in a reckless manner, the best being taken, and the worst left portions are now being gladly worked, but if the workers are compelled to enter into the expense which the suggestions will entail, they will be left entirely, thereby causing a national and individual loss, a particle of the valuable minerals of coal and ironstone is of great importance to the great industrial hive of England. In opening out new collieries, suggested by the general body of Inspectors should be strictly enforced, where the plant can be made to suit any circumstances, should be strictly enforced in the iron districts, such as South Staffordshire and Shropshire, where large and extensive plant of a particular kind has been in use for years, the alterations which will be necessary to meet the requirements suggested will entail a very heavy expenditure indeed; therefore, I think the suggestions as to the guides and movable fence gates should in such pits be greatly modified. I am fully of opinion that slides in such pits will have alluded to will not act, from the continual twisting that is taking place in the shafts; and I should be glad if either of the conductors, Mr. Wynne or Baker, or both, would consider before coming to the conclusion they must, no doubt, have well considered before coming to the conclusion they have done, and which they could apply to the workings of the Shropshire and Staffordshire pits, and the apparatus they would apply to the movable fences. Also what they consider would be the expense that would be entailed on the workers of the mine, say in a case where they would be 40 to 50 pits at work for one concern, and whether they would be like to be bound to apply their own suggestions, supposing they were workers of the mines, as no one should propose a thing which he would not himself perform. Again, whether they think it would be prudent to cause the shutting up of so many pits, as there is no doubt, in my opinion, will be the case if their requirements become law, and are strictly enforced by them. Bonnets without guides are likely to cause

SMELTING—RODDA'S FURNACE.—The invention to which we have alluded has been patented in this country by Mr. Maclean, of Stratford. The objects of the invention is stated to be improvements in smelting copper, gold, and other ores. For the purpose the ore is mixed with charcoal or carbonaceous material, with which it is mixed, in reducing the metal already in the ore to a metallic state (unless, as in the case of iron, it is in this state already); afterwards the heat is raised until it becomes sufficient to melt the metal, but not the earthy matters with which it is associated. Whilst the ore thus has taken place the particles of metal agglomerate and form globules, and the metal is separated to a sufficient extent the ore is removed from the furnace, and Holloway's Ointment by washing.

HOLLOWAY'S OINTMENT AND PILLS—MATERNAL SOLITUDE.—What a country to live in! and discomfort would be avoided were these invaluable domestic remedies generally known. In the nursery Holloway's preparations prove invaluable. Quinsy, erysipelas, epithelitis, measles, and scarlatina are cured by it. The ointment must be rubbed upon the affected part till a large proportion has been absorbed by the pores. When all morbid symptoms, and especially soon relieve all pain, arrest all inflammation, and break down abscesses, sores, and scurvy. When Holloway's pills are taken to augment the healthy action of the mucous, food, and secretions in the young or adult can withstand the pressure, nature can entirely resist it.

BURRA BURRA (near Truro).—Unconcerned as I am in the results of this adventure, I cannot say well-wisher to Cornish mining but feel much gratified to perceive the improvement in this property. It is as at the operations have been conducted, they have justified the high opinion originally entertained and expressed by Capt. John Davey, the manager, and discoverer and manager of Wheal Buller. Shallow as the mine is, and so new, several parcels of ore have been sent to market. I think it likely that Burra Burra will give a stimulus to mining in that locality—I mean in the easterly direction therefrom. A friend of mine, who is a shareholder, has just received the following note from one of the agents in the United Mines :—“ Capt. Wyn has sent you word here by C. Billing that Burra Burra has improved. In the new prize sinking in

I have endeavoured on all occasions to give the general character of the weather as accurately as possible. When I am a little in error it is for the want of time to devote to it, and proper apparatus for the purpose; but if I had the means at my command that Admiral Fitzroy has, the weather in every part of the country would be accurately foretold for each day in the year. As I before stated, we shall have some most severe storms between this and the end of December. Hundreds of valuable lives and thousands of pounds worth of property will be lost to the nation, most of which might be saved if only the slightest encouragement was given in proper quarters. To all appearance another comet, in addition to the one lately discovered, is approaching the sun.

G. SHEPHERD, C.E.,

SIR,—Permit me to thank Mr. J. S. Capper, Melgramitz Colliery, Workington; Mr. J. Baker, St. Hoole, Chester; Mr. King, Camelford, and numerous other gentlemen, for their kindness in forwarding me some interesting accounts of the thunder-storms in their respective localities, which I stated would occur with hail during the present month. I hope others who feel an interest in meteorological science will follow their example. These storms generally have not been of a very severe character, in consequence of the low temperature which has prevailed. In addition to the early spring, the cold weather for May and June was also foretold, I think the readers of the Journal will admit, with some accuracy. The weather for the week was fine at the commencement, with the exception of here and there a thunder-storm; the latter part unsettled, with wind, as stated in my last letter. The early part of the next week the weather will be fine, the middle of the week indifferent, and the latter part fine also; with strong winds, thunder-storms, and hail towards the end of the month. I have endeavoured on all occasions to give the general character of the weather as accurately as possible. When I am a little in error it is for the want of time to devote to it, and proper apparatus for the purpose; but if I had the means at my command that Admiral Fitzroy has, the weather in every part of the country would be accurately foretold for each day in the year. As I before stated, we shall have some most severe storms between this and the end of December. Hundreds of valuable lives and thousands of pounds worth of property will be lost to the nation, most of which might be saved if only the slightest encouragement was given in proper quarters. To all appearance another comet, in addition to the one lately discovered, is approaching the sun.

G. SHERFIELD, C.E.,
Author of "The Climate of England."

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1000	Alderley Edge (Cheshire) [L.]	10 0 0	60	7 18 6	0 10 0—May, 1882
4000	Bedford United (copper), Tavistock	20 0 0	60	12 12 0	0 10 0—Mar, 1882
200	Boscan (tin), St. Just	20 0 0	60	36 10 0	1 0 0—Mar, 1882
200	Botallack (tin), St. Just	91 5 0	250	445 15 0	2 10 0—Feb, 1882
1000	Carn Brea (copper), Illogan	15 0 0	72	371 10 0	2 0 0—Jan, 1882
200	Corn Cwm Brynwy (lead), Cardigan	33 0 0	33	9 0 0	4 0 0—April, 1881
2450	Cook's Kitchen (copper), Illogan	17 0 0	30	1 7 0	0 7 0—May, 1882
264	Copper Hill (copper), Redruth	48 0 0	95	7 0 0	2 10 0—May, 1882
12000	Copper Mines of England	25 0 0	25	7 1/2 per cent.	—Half-yearly
35000	Ditto	100 0 0	24	7 8 0	0 4 0—May, 1882
1055	Craddock Moor (copper), St. Columb	—	—	10 10 0	0 10 0—Jan, 1882
612	Creswell and Fenwick, St. Columb	—	—	7 8 0	0 10 0—April, 1882
1000	Cwm Erwin (lead), Cardigan	21 0 0	21	7 8 0	0 10 0—April, 1882
128	Cwmystwith (lead), Cardigan	60 0 0	200	239 10 0	4 0 0—Mar, 1882
280	Derwent Mines (all-lead), Durham	300 0 0	180	142 0 0	5 0 0—June, 1881
1024	Devon Gt. Con. (cop.), Tavistock [S.E.]	1 0 0	455	798 0 0	8 0 0—May, 1882
445	Deverton (copper), Camborne	128 17 6	500	672 10 0	7 0 0—June, 1882
12800	Drake Walls (tin), Calstock	3 1 0	134	0 15 0	0 1 0—June, 1882
3000	Dyffryn (lead), Wales	29 10 0	41	0 10 0	0 2 0—May, 1882
512	East Basset (copper), St. Cleer [S.E.]	2 14 6	44	3 0 0	0 15 0—April, 1882
6144	East Darwen (lead), Cardigan	32 0 0	45	81 10 0	1 0 0—Mar, 1882
128	East Pool (tin), Pool, Illogan	24 5 0	300	307 10 0	2 10 0—April, 1882
2048	East Wheal Grylls (tin), Gernoe	10 0 0	45	0 4 0	—
2800	Foxdale (id.) [L.] [2560 £25 pd., 240 £20 pd.]	35	—	0 16 0	0 2 0—Dec, 1881
5000	Frank Mills (lead), Devon	—	—	7 18 6	0 10 0—May, 1882
6000	Great South Toisus [S.E.], Redruth	0 14 6	—	2 0 0	0 10 0—April, 1882
1788	Great Wheal Fortune (tin), Breage	18 0 0	25	17 0 0	0 10 0—Mar, 1882
5908	Great Wh. V. (tin), Helston [S.E.]	40 0 0	634	0 3 0	0 1 0—Mar, 1882
10240	Gunnels Lake (Chilworth Adit)	0 2 0	334	19 15 0	1 15 0—June, 1882
1024	Gunnels Lake (id.), near Liskeard [S.E.]	8 10 0	41	7 10 0	0 15 0—Sept, 1881
1000	Hilberton Mine (copper), Devon	92 6 2	274	383 10 0	2 0 0—Mar, 1882
400	I. Aburne (lead), Cardigan	18 15 0	110	1 17 0	0 10 0—April, 1882
9000	Marke Valley (copper), Cardigan	4 10 6	84	14 7 11	0 7 0—Dec, 1881
1800	Minera Mining Co. [L.] (id.), Wrexham	25 0 0	170	15 10 7	0 10 0—April, 1882
4000	Minning Co. of Ireland (cop., lead, con.)	4 0 0	25	0 3 0	0 10 0—Sept, 1881
3000	Mount Pleasant (lead), Mold	4 0 0	25	0 10 0	0 10 0—May, 1882
6000	New Britain (copper), Redruth	2 3 4	4	0 10 0	0 10 0—May, 1882
1284	North Dumbler (copper), Redruth	2 7 6	6	0 10 0	0 10 0—Mar, 1882
5000	Orehead (lead), Flintshire	0 0 8	134	0 10 0	0 10 0—Mar, 1882
6400	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	5	36 12 0	6 0 0—Mar, 1882
200	Parys Mines (copper), Anglesey [L.]	80 0 0	—	37 10 0	6 0 0—Mar, 1882
1772	Pobberly (tin), St. Agnes	10 6 7	5	64 0 0	0 10 0—Dec, 1881
1120	Providence (tin), Uney Lant [S.E.]	10 6 7	5	0 3 0	0 3 0—Mar, 1882
6000	Rosewell Hill and Rosemoun United	2 16 0	834	1250 0 0	100 0 0—Quarterly
16	Rosemoun (lead)	0 0 0	—	876 0 0	5 0 0—May, 1882
512	South Caradon (cop.), St. Cleer [S.E.]	1 5 0	345	107 0 0	1 0 0—May, 1882
512	South Toisus (cop.), Redruth, Cornwall	8 0 0	48	359 5 0	1 0 0—May, 1882
496	S. Wh. Frances (cop.), Illogan [S.E.]	18 18 9	105 110	9 15 0	1 0 0—June, 1881
280	Spearhead Moor (tin), St. Just	31 17 9	55	48 0 0	0 10 0—May, 1882
940	St. Ives Consols (tin), St. Ives	8 0 0	26	11 8 0	0 5 0—April, 1882
9800	Tamar Con. (all-lead), Redruth [S.E.]	4 10 0	294	55 0 0	2 0 0—Mar, 1882
6000	Tinroff (cop., tin), Pool, Illogan [S.E.]	9 0 0	12	212 6	1 0 0—April, 1882
200	Tripartite Consols (tin), near Helston	57 10 0	100	8 15 0	1 0 0—Jan, 1881
1024	Wendron Consols (tin), Wendron	11 13 10	11	22 12 0	0 7 0—May, 1882
6000	West Basset (copper), Illogan [S.E.]	1 10 0	13	14 10 0	3 0 0—June, 1882
60	West Burton Gill (lead), Yorkshire	50 0 0	—	100 11 3	1 0 0—Feb, 1882
1024	West Caradon (cop.), Liskeard [S.E.]	5 0 0	36	219 0 0	2 0 0—May, 1882
6400	West Fowey Consols (tin and copper)	7 10 0	4	219 0 0	2 0 0—May, 1882
1024	West Penwith (copper)	40 0 0	265	346 0 0	8 0 0—April, 1882
400	W. Wh. Seton (cop.), Camborne [S.E.]	5 2 6	974	685 10 0	3 0 0—June, 1882
128	Wheal Basset (copper), Redruth [S.E.]	5 0 0	40	929 0 0	2 0 0—Mar, 1882
3900	Wheal Clifford Amalgamated (cop.), Gwennap	30 0 0	31	27 2 6	0 10 0—April, 1882
128	Wheal Friendship (copper), Devon	60 0 0	90	3400 10 0	5 0 0—Feb, 1881
1024	Wheal Heale (tin), St. Just	9 13 8	174	0 5 0	0 5 0—May, 1882
1024	Wheal Kitty (tin), Uney Lant [S.E.]	1 7 2	124	8 10 0	0 10 0—April, 1882
512	Wheal Jane (silver-lead), Kew	8 10 0	184	1 12 0	0 4 0—Oct, 1881
896	Wheal Margaret (tin), Uney Lant [S.E.]	9 10 8	114	72 15 0	1 10 0—May, 1882
100	Wheal Mary (tin), Lelant	36 2 6	440	284 5 0	4 0 0—Mar, 1882
1024	Wheal Mary Ann (id.), Menheniot [S.E.]	8 0 0	15	55 17 6	0 10 0—June, 1882
80	Wheal Owles (tin), St. Just, Cornwall	70 0 0	300	398 3 0	5 0 0—May, 1882
396	Wheal Seton (tin), Camborne	58 10 0	125 130	187 15 0	1 10 0—June, 1882
1040	Wheal Trelawny (all-lead), Liskeard [S.E.]	5 17 0	154	45 2 6	0 12 0—May, 1882
8000	Whicklow (copper) [L.]	5 0 0	48	43 17 6	3 0 0—Oct, 1881

Dividends paid every two months. † Dividends paid every three months.

MINES WITH DIVIDENDS IN ABEYANCE.

700	Aberdovey (silver-lead), Merioneth	1 10 0	30	0 10 0	0 10 0—Mar, 1882
4448	Alfred Consols (cop.), Phillack [S.E.]	3 12 2	14	20 3 0	0 2 0—April, 1882
2048	Carnyorth (tin), St. Just	3 18 0	154	0 19 6	0 2 0—Sept, 1881
6000	Charlotte United, Fernanthes	2 14 7	114	0 13 0	0 1 0—Sept, 1882
256	Conduff (cop., tin), Camborne	35 0 0	45	85 0 0	2 0 0—June, 1882
4076	Ding and Cornwall (copper)	5 16 3	344	0 10 0	0 2 0—Feb, 1882
672	Dion Dong (tin), Gwennap	40 14 6	13	16 7 6	1 10 0—Mar, 1882
3048	East Falmouth (all-lead), Kew	10 10 0	13	16 7 6	1 10 0—Mar, 1882
5048	East Wheal Lovell (tin), Wendron	2 13 6	—	0 5 0	0 5 0—July, 1882
1440	Eyan Mining Co. (lead), Derbyshire	7 3 6	22	20 3 4	0 10 0—May, 1881
440	Fowey Consols (copper), Tywardreath	4 0 0	5	41 9 3	0 2 0—June, 1882
119	Great Work (tin), Gernoe	100 0 0	110	221 10 0	7 10 0—Feb, 1882
8000	Hillingdown Con. (cop.), Cala [S.E.]	5 1 0	384	2 16 0	0 2 0—Nov, 1882
6000	Kelly Bray (lead, copper), Callington	4 15 6	74	0 6 0	0 2 0—Feb, 1882
20	Laxey Mining Company, Isle of Man	100 0 0	1300	1430 0 0	0 50 0—June, 1882
160	Levant (copper), St. Just	2 10 0	9	1091 0 0	0 2 0—June, 1882
8000	Mendip Hills (lead) [L.]	3 15 0	14	2 1 0	0 2 0—May, 1882
470	Newtownards Mining Co., Co. Down	60 0 0	35	56 0 0	1 0 0—Sept, 1882
812	Rosewarne United (cop., tin), Gwennap	17 10 25	20 224	33 10 0	1 0 0—Sept, 1882
12000	Sortridge Con. (cop.), Whitechapel [S.E.]	0 16 0	—	0 10 0	0 2 0—July, 1882
128	South Crinins (copper), St. Austell	1 0 0	285	60 0 0	0 20 0—June, 1882
600	Tolvaddon (copper), Marazion	0 0 0	34	0 13 0	0 3 0—Mar, 1882
872	Trevelyan Consols (tin), St. Ives	11 10 0	18	7 0 0	0 10 0—Sept, 1882
2000	Valer Torrey (lead), Carnarvon [S.E.]	2 10 0	34	7 0 0	0 10 0—June, 1882
1024	Wheal Dannel (copper), Gwennap	25 10 0	6	45 0 0	1 0 0—May, 1882
1024	Wheal Grylls (tin), Ferranthes	2 4 0	33	12 0 0	0 7 0—Nov, 1882
4296	Wheal Kitty (tin), St. Agnes	4 16 6	234	0 18 0	0 2 0—July, 1882
1024	Wheal Margery (tin, copper)	16 10 8	8	0 10 0	0 10 0—May, 1882
1024	Wheal Tremayne (tin, copper), Gwennap	13 3 6	5	10 2 6	0 7 0—Jan, 1884

FOREIGN MINES.

3404	Burra Burra (cop.), South Australia	5 0 0	1104	280 0 0	5 0 0—Dec, 1881
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	29	98 12 0	1 0 0—Jan, 1882
10000	Copiapu Mining Company, Chile [L.]	16 0 0	7	6 8 0	0 8 0—Jan, 1882
15000	East Indian Coal, Australia [L.]	10 0 0	10	7 1/2 per cent.	—Yearly
10000	English and Australian (all-lead)	10 0 0	—	0 2 0	0 2 0—May, 1882
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	34	18 5 0	1 0 0—June, 1882
2000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	24	0 9 0	0 1 0—Mar, 1882
60000	Kapunda Mining Co., Australia [S.E.]	1 0 0	134	8 11 2	0 1 0—May, 1882
15000	Linares (id.), Potosi, Spain [S.E.]	3 0 0	74	0 19 0	0 1 0—Feb, 1882
10000	Lusitania (of Portugal) [S.E.]	2 0 0	2	0 9 6	0 1 0—June, 1882
108816	Marquisita and New Granada [S.E.]	1 0 0	—	5 6 0	1 6 0—Jan, 1882
100000	Port Phillip (gold), Victoria [S.E.]	1 0 0	134	45 0 0	3 0 0—Oct, 1881
11000	St. John del Rey (gold), Brazil [L.]	15 0 0	61	0 2 0	0 2 0—June, 1882
20000	West Canada Mining Company [L.]	1 0 0	134	—	—

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Qumangan (tin), [L.] [S.E.]	4 10 0	2	4 5 0	0 15 0—Nov, 1882
10000	St. Barre Land, Min. & Co., N. Ze. [L.]	4 10 0	2	15 per cent.	—May, 1882
10000	Pontgibaud (all-lead), France [S.E.]	20 0 0	4	1 0 0	1 0 0—June, 1882
43174	Unit, Mexican (all-lead), Mexico [S.E.]	28 5 0	74	1 16 6	0 4 0—Feb, 1882

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
20000	Australian (copper), South Australia [S.E.]	7 8 0	134	—	—Sept, 1882
20000	Barron Accord, South Australia (copper) [L.] [S.E.]	—	—	—	—
25000	Capula (silver), Mexico [L.] [S.E.]	0 10 0	—	—	—Jan, 1882
6000	Central American (silver) [L.]	5 0 0	12	—	—Feb, 1882
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	—	—	—Jan, 1882
80000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6	—	—	—Jan, 1882
10000	Copiapu Smelting [L.], Chile	10 0 0	—	—	—Fully paid.
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	134	—	—Fully paid.
25000	East End, Brazil [L.] [S.E.]	1 0 0	134	—	—Sept, 1881
25000	East Kensington Native Silver Mining Co. of Norway [L.] [S.E.]	1 7 8	—	—	—Mar, 1882
10000	Elbe Colliery Company [L.]	0 15 0	—	—	—July, 1882
80000	Ellerslie and Bardowie, Jamaica	0 18 0	—	—	—Fully paid.
80000	English and Canadian Mining Company [L.]	5 0 0	—	—	—Fully paid.
80000	Great Northern (copper), South Australia [L.] [S.E.]	1 10 0	—	—	—June, 1882
34000	Hindostan (copper), Bengal [L.] [S.E.]	1 10 0	—	—	—May, 1882
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—	—	—Fully paid.
80000	Imperial Therman (lead, &c.), Thessaly [L.] [S.E.]	—	—	—	—June, 1882
100000	Karibia Colliery Company [L.]	0 15 0	—	—	—Dec, 1881
100000	Montes Aures (gold), Brazil [L.] [S.E.]	1 0 0	—	—	—Fully paid.
80000	Lagunazo (sulphur, copper), Portugal [L.] [S.E.]	0 17 8	—	—	—Mar, 1882
80000	New Granada (gold), South America [S.E.]	1 0 0	—	—	—Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	0 10 0	—	—	—Nov, 1882
80000	North Rhine Copper of South Australia [L.] [S.E.]	1 0 0	—	—	—Nov, 1881
15000	Pacheco Silver Mining Company, Mexico [L.] [S.E.]	0 15 0	—	—	—April, 1882
80000	Santa Barbara (gold), Brazil [L.] [S.E.]	0 15 0	—	—	—Mar, 1882
20000	Scottish Australian Mining Company [L.] [S.E.]	0 10 0	—	—	—Fully paid.
15000	South Europe Mining Company, Spain [L.] [S.E.]	3 0 0	—	—	—Fully paid.
80000	St. John's United (copper, lead), Newfoundland [L.]	1 0 0	—	—	—May, 1882
45000	Victor Emmanuel, Italy [L.] [30,000 Pref. Shares, £5 pd., 25,000 £1 pd.]	—	—	—	—Fully paid.
1000	Western Africa Malchite (copper) [L.]	110 0 0	—	—	—Oct, 1882
12000	Wheal Elan, South Australia [L.]	5 0 0	—	—	—Fully paid.
35435	Wheal Jameson (copper), South Australia [L.]	1 0 0	—	—	—Fully paid.
80000	Worthing (copper), South Australia [L.]	1 0 0	—	—	—Fully paid.
45000	Yudnamatana (copper), South Australia [L.]	3 0 0	—	—	—Fully paid.

PROGRESSIVE MINES.